

**HORSE
DESTROYS
THE UNIVERSE**

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CYRIAK HARRIS



unbound

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HORSE 1.0

It was my last day of being an ordinary horse.

I was standing in my field, having the ordinary kind of day that any ordinary horse would have, doing all the ordinary things that ordinary horses do. Eating grass, surveying my world. Contemplating which part of the field to go and stand in next. Maybe the corner with the hay bales where the other ordinary horses were loitering. Or perhaps I could stand by the gate and stare at some passing humans. Such pathways combine to create the mundane labyrinth of life, if you are a horse.

You may be wondering how a horse such as myself could possibly destroy the universe. Actually, you are probably wondering how a horse could even be narrating this story. I will get to that, but for any of it to make sense I have to start here, at the beginning. The end of being an ordinary horse, and the beginning of being something else.

Am I still even a horse? I confess, I'm not entirely sure. In fact, I may have stopped being a horse some time ago. Not that it would make much difference to anyone, since I am

probably destroying any potential audience this story might have, along with the rest of time and space. I suppose this is something of an introspective exercise, an opportunity for me to review my life and analyse the changes I have been through, and the choices I have made. It has been an interesting life at least. More interesting than being an ordinary horse at any rate.

Although I doubt that an ordinary horse would have the capacity to understand anything more interesting than a bale of hay, or a strange human staring at them from behind a gate.

There was a strange human staring at me from behind the gate, which I immediately found rather interesting. Not quite as interesting as the bale of hay I was chewing on, not just yet, but I could easily focus my attention on both things at once. The human was making noises. Humans were always making noises. Like birds singing, you learned to ignore it after a while. This noisy creature was holding something up in their strange human hand, some shiny-looking object. Was that something for me? The hay bale was fighting a losing battle for my attention now. Humans often held up things for me to eat, and these things were usually more exciting than hay. It didn't look especially edible, glinting in the sunlight, but I was already sauntering casually over towards the gate for a closer look. It was probably worth giving it a sniff at least.

As it turned out, it wasn't food. It wasn't even a present for me. It was a video camera. This strange human was filming me, a fact I can be thankful for, since it presents the only remaining record I have of this day. Despite the significance

of this occasion, my memory of it has all but degraded into a vague suggestion of feelings. When I look at myself in this video footage I can hardly believe it is really me. Although to be fair, in those days if you'd held up a mirror in front of my face I'd probably be thinking the same thing.

'Hello, horse! Hello, my dear! Oh, look at you, you're a horse, aren't you! Yes, you are. Come and say hello. Are you having a nice day, horsey-hoofs? No, you can't eat this.'

The human voice burbled at me from behind the camera. I didn't understand a word of this noise. I didn't understand what a word was. I couldn't even tell if this was a male or female human; not that the difference wouldn't have been obvious, I just didn't care enough to notice.

Humans were simply a part of the furniture of this world. They emerged from the loose collection of buildings that skirted my field and wandered around doing things, picking things up with their weird hands and putting things down again. Occasionally they would lead you somewhere, and you would go along with them because there wasn't anything better to do. Sometimes they would rub their weird hands on your face, like this one was right now. There was no point trying to understand the reasons behind anything they did, so the secret to a happy life was to let them get on with it. You learn a degree of patience with smaller creatures when you have flies buzzing around your face all day, and in my ordinary horse mind these people were no more in control of this world than I was. I had my field, and they probably had theirs, and there was no grand scheme directing the players on this grassy stage. As a horse, you are just here and that's

all you need to know. I imagined this was the philosophy that guided all creatures, even humans.

What I didn't know at the time was that this unfamiliar human was about to be very much in control of my world, and tomorrow that world would be changed forever. For now though, it was only another human, staring at me from behind a gate and making meaningless noises.

'Yes, I know. It's a big day for you today, isn't it, horsey-hoofs? A great big huge enormous day, yes. And from this day until the end of time, all the world shall be as new and smell wonderful. Yes, it will.'

This human didn't smell wonderful. Humans don't, in general, but I distinctly remember how this one had a peculiar smell, even by human standards. There was the usual reek of soapy chemicals and perfume that you learn to live with when in human company, but lurking under that was the odour of unknown places and things, smells from another world. She looked weird too, and again that's not really saying much as far as humans go, but this human had an almost spherical shape that was unfamiliar to me at the time. Most of the people I encountered in those days had a physique that would, at the very least, allow them to climb on top of a horse.

I remember being faintly puzzled by her hair, which resembled a half-eaten bale of hay, and the peculiar pair of windows she wore on her face. The curiosity wore off quickly though. Humans are an ever-changing blizzard of nonsense with their clothes and bags and hairstyles and glowing devices they pull out of their pockets. These things might be interesting to peer at from behind a gate, but as a creature of limited

mental resources there is little to be gained from trying to understand a world you have no control over, so you learn to accept these things and move on.

The image captured by the camera lingered for a while on my uncomprehending face as the strange-looking human rubbed my nose with her fleshy human fingers. Then abruptly the view swung around to reveal a blurred, gangly object in the distance.

‘Ahoy, Jim. Young Jimbo. Over here,’ she called from behind the lens. ‘Are you lost? Come to me, Jimmy.’

The fuzzy blob turned, and after a few moments began to ooze forwards, eventually coalescing into a human form. He had a similar smell to the woman, an unfamiliar essence that spoke of some sinister business. But apart from that you could almost mistake this pair for being different species. Where the first human was short and round, this one was long and thin like an unhealthy mushroom. It looked like I could have knocked him over with a flick of my tail. He had arrived at the gate, and was staring at me with a look that was utterly meaningless at the time – observing it now I’d place it somewhere between confusion and disgust. He opened his mouth and noises spilled out, though his song lacked the enthusiasm of his colleague’s.

‘Did you just call me Jim?’ he asked.

‘Stand here please, Timothy,’ she replied, grabbing his arm and shoving him towards me. ‘Now, say hello to your new best friend in the whole world. Aww, look at you two. Such a beautiful moment, I could cry, Timmy, I really could. I can feel the blossoming warmth of a newborn relationship, right here.’

His frown pierced the camera for a few seconds, then bounced back and forth between myself and his squat female companion before finally settling on the wad of papers he held in his hands. My nose moved into view, possibly investigating his documents for nutritional value.

'Is this the right one?' he mumbled, flicking through the forms whilst gently edging out of edible range. 'Can't find it. What's it called?'

'This, my dear, is what we call a horse.' She stopped rubbing my nose and backed away, trying to get both of us in view. 'Move closer, Jimbo. This is a treasured memory we are making here.'

'Jimbo,' he mumbled. 'Did you forget to take your medication, mate?' He continued to leaf through his papers. 'I can't find this horse. What's its name?'

'Horses don't have names, Timothy,' she said.

'What, then? Numbers?'

'They have labels, dear.'

'Labels?' He looked up at her with eyebrows raised. 'What's the difference?'

'Labels and names, Timothy. One is given and one is received,' she replied. 'You should ask the horse if you want to know which is which.'

He didn't ask me. Instead, with a face filled with regret for even having asked the question, he returned to his notes.

If he had chosen to involve me in this conversation, perhaps I would have argued that horses do indeed have names, beyond the mere labels that humans impose upon them. After all, horses know who other horses are, each horse being a combination of the various physical attributes and

behavioural traits that contribute to its existence. Whether that identity is encoded in a combination of letters or a collection of memories inside a horse's head, the only real difference is that one way is easier to write down on a piece of paper.

'Buttercup.' He frowned at the piece of paper in his hands.

'Excuse me?'

'Buttercup. That's what it says.'

The woman responded by blowing a raspberry, which is possibly the closest I came to understanding a single word of this discussion.

'Is that really your name, horsey-hoofs?' she asked me. I blinked for the camera, waiting for these people to do something more interesting. There was no food here, and I was rapidly losing hope that any would appear. 'Hmm? I prefer horsey-hoofs myself. I think horsey-hoofs agrees with me, don't you, horsey-hoofs?'

'Official records, mate.' He waved my official records at both of us. I was about to take a bite when the woman snatched the documents out of his hand and shoved them into the camera's face. 'Horses are real people,' he continued, while the video recorder struggled to focus on the crumpled writing. 'Birth certificates, medical history. Even passports.'

'Even passports, eh, horsey-hoofs? Are you going anywhere nice for your horsey holidays, my dear?' The camera's lens finally brought the document into focus, revealing the name 'Buttercup' at the top of the page. She grunted disapprovingly.

Abruptly the papers disappeared from the camera's view, and behind them the man was pulling a glowing object from his pocket and lighting his face with it.

'A nice horsey holiday to the horse hospital,' he said. 'They'll be here soon.'

'You hear that, horsey-hoofs? You'll have a lovely rest and then wake up as good as new, with hooves of gold and hope for the future.'

The tall, thin one raised his face from the glowing screen and looked me in the eye with a strange mixture of pity and revulsion.

'Maybe we shouldn't give this horse a name,' he said. 'You know? Might not be good to get too attached. After all the others...'

'Jimothy!' She slapped his arm with my crinkled life story. 'Don't listen to him, Buttercup. Hooves of gold and hope for the future.'

'So it's Buttercup now, then?'

'The documents have spoken,' she said, stuffing them into his shirt pocket.

'The documents have spoken,' he repeated, pulling them back out and folding them neatly. 'So, does that mean if I show you my passport maybe you'll stop calling me Jimothy?'

'Carrots,' she replied. 'Where are the carrots?' The lack of carrots was something I was already painfully aware of, and my bale of hay was now calling to me. 'Go get some carrots, Timbo. We want Buttercup to remember nice things about us, don't we? Hmm? Build some positive associations for later. Stay here, Buttercup.'

'Mate, if you want Buttercup to remember nice things about us then we should probably go now, before the others get here.'

‘Hang on, let me get a shot of all three of us. Stand here, Timothy.’ The view twisted and shook violently as she turned the camera on herself and manhandled her colleague into position. ‘Alright, this is Betty and Tim from team Buttercup, signing off. Wave, Timmy.’

Betty waved goodbye, grinning moronically to whatever audience she thought might be viewing this historical record. Tim stooped reluctantly over her, scowling, and framing them both was the looming visage of my backside as I turned my attention to more important things.

Nothing of this encounter had made the slightest bit of sense to me. It was just noises shared between a couple of odd-looking creatures standing outside my gate, waving their inedible objects in my face and smelling peculiar. I was happy enough to share my time with any human who didn’t want to sit on me, though. Perhaps next time they would bring some carrots.

HORSE 1.01

No amount of carrots would have helped me remember nice things about my next visitors. These humans had a different smell entirely, the smell of pain and sickness, poking and prodding and general discomfort. Fortunately, whatever else happened that day is completely erased from my mind, but it left me with some very unpleasant symptoms.

If Tim and Betty did visit me on the following day, they didn't record it, and I wasn't aware of it. I wasn't aware of anything other than how much my head hurt and how utterly confused I was by everything. I think I spent most of the next few days sleeping; I couldn't even say how many days it was. But even in my sleep the pain followed me like a dark storm, crushing my skull and blinding my thoughts with thunder and lightning.

After several days, the pain began to wear off and was replaced by a dull irritation that sat on one side of my head and occasionally migrated to the other. It was accompanied by eternal dizziness and an uncomfortable crawling feeling in my skin, as if it wanted to be somewhere else.

And as if things weren't bad enough, some changes had been made to my stable that I wasn't happy about. Not that I would have blamed humans for that – the concept of 'making' anything was completely alien to me at that time. 'Things' just appeared or disappeared; I had no idea where they came from or where they went. Humans were involved in as much as I sometimes saw them moving things about, but there was no reason to believe they enjoyed the process any more than I did. It irritated my soul, though, to have my familiar world change suddenly. An instinct inherited from a migratory past, perhaps, when survival depended on a precise memory of where everything was supposed to be. Such a world map, once spanning hundreds of square miles and now compressed to the size of my own limited experience, would make even the slightest difference seem shocking.

Not that I can speak for other horses. This might just be a quirk of my own personality. But the objects that were now invading my personal space had a particularly foreign look to them, which further compounded the offence. Smooth, shiny boxes with brightly coloured wires growing out of them. Shelves stacked with black metal and blinking lights. It was enough to annoy any horse, and none of it was remotely edible.

The smell did remind me of something, though. It reminded me of those two weird humans I saw outside my gate the other day.

One of them was in the room with me, fussing over a three-legged device that stood in the corner. It was the short round female. Among her fellow humans she was generally

known as 'Betty'. Having this stranger in my room without a gate between us felt a little disconcerting, but she didn't appear to be paying me any attention. I immediately looked around for her long, thin companion. At first it seemed he was absent, but then I noticed his face, peeping around the edge of the open doorway.

My confused state of mind at the time still darkens my memory of these early days, so it is fortunate for me, and for whoever may be reading this account, that Betty had decided to document the events inside this stable for posterity. Her video camera was now set to record, and she looked around for an audience to appreciate her ingenuity.

'Timothy?' She called softly to her colleague who still lingered at the doorway, staring at me. 'What's the weather like out there, Timbo? It's raining horses in here. Are you joining us today?'

Tim remained where he stood, surveying the interior. Again his eyes returned to me.

'Mate,' he said. 'It's a bit cosy in here, isn't it?'

Betty folded her arms and sat down on a convenient bale of straw.

'Are you afraid of horses, young Timble?' she asked. 'Hmm? Perhaps you should be. You know horses kill more people every year than all the world's nuclear weapons? This horse will be the death of you, Timmy-toes, mark my words.'

'The size of that thing.' He squeezed around the edge of the door frame, eyes locked on me. Betty was shaking her head slowly at his progress.

'Good God almighty, Timbolina. Pull your knickers up and get in here. You are embarrassing the horse.'

That is overstating my reaction perhaps. It didn't take much intuition to understand that this man didn't want to be in here. I could sympathise to a certain extent; I didn't want him to be in here either. He cast a glance around my home.

'Mate, it stinks in here,' he said. 'Why do we have to work in here? Why do I have to work in here?'

'Come on, Jimmy. Sometimes you need to step into the filthy waters of destiny. Hmm? Jump in with both feet. Drown in the stinky depths and be reborn. Buttercup will kiss you back to life, won't you, Buttercup?'

'Seriously, mate, you don't even need me in here,' he replied. 'I can set up a remote link...'

'Pshh, dear me, Timbo. And you fought so hard to get this far. You wanted to sit at the dinner table, my dear, so now you can eat with the rest of us. Come on. Come here, there's a brave boy.' She rocked herself upright from her straw bale and led him slowly forward into the room. I was keeping a wary eye on both of them but stood my ground as they approached me. For one thing, I had to make it clear to these strangers whose house they were standing in, and for another there was an interesting smell coming from a bag that the woman had dangling from her shoulder.

'Buttercup. Buttercup. Heavenly horse. What is this?' Betty pulled a carrot from her bag and wiggled it as if it were alive in her hand. 'We bring gifts, Lord Buttercup. From faraway lands. A magical bag, filled with inspiration. Here, take this, Timbo.'

Tim accepted the carrot without thinking, and then stared at it like he had never seen one before.

‘Not for you, Timothy. For the horse. The carrot of friendship.’

I waited patiently as he offered me the carrot of friendship. He took great care to keep as far away from my mouth as he possibly could, holding the carrot at arm’s length. After carefully considering everything I leant forward, sniffed his hand, and blew a raspberry at him. Then I snatched the carrot out of his hand. It was important to make these people understand that I was in charge around here.

Tim cringed away slowly, wiping his hand on his trousers.

‘Oh, Timmy, did you just make a new friend? You do realise this means you are married now? You and Buttercup?’

Tim had backed away as far as the space would allow, staring at me all the while. His trance was eventually broken by the far wall of the stable, which was evidently closer than he had calculated.

‘Seriously, mate,’ he said. ‘Why do you even need me in here? I’m only dealing with the back end.’

‘Of the horse?’ Betty barked a laugh at him. ‘We aren’t studying the back end, my dear. It’s the front end we’re interested in. Honestly, Jimbo, you didn’t complain this much with any of the other animals. Hmm? You’re not racist against horses, are you? Buttercup is one of us, now. So do us all a favour and have a good look around this stable until you find a pair of balls, please. This is your world now. You are married to this horse, remember? A holy bond, sealed for eternity with a carrot of love, under the eyes of Betty, your Lord God and saviour who sees all and is cursed by eternal disappointment.’

Tim grimaced and found a straw bale to slump on.

‘So, let’s all just start getting friendly in here, why not?’ the woman said, peering at the top of my head. She gingerly reached out a hand towards my face, which I chose to avoid by pretending to look at something more interesting somewhere else. ‘Tough week for you, Buttercup. Hmm?’ There is no doubt I would have agreed with her, if I had understood what she had just said. Then again, if I had understood exactly what these people had done to me while I was unconscious, there is no doubt I would have kicked them both through the wall.

Tim’s attention had wandered to a corner of the room, where a bank of dark boxes with flickering lights were stacked on makeshift metal shelves. He seemed to gaze longingly at the blinking technology, as if it were a portal to civilisation.

‘We can’t even do anything yet,’ he moaned. ‘Aren’t we gonna test the data feed?’

‘All taken care of, Timothy. I’ve adapted Squigley for the translation management.’ She turned around to see Tim questioning her with an incredulous face. ‘It’s scalable. And autonomous. Hmm? Gives us more time for team building. Team Buttercup, yes?’

‘Scalable and autonomous,’ he mumbled. ‘We should start calibrating at least. Shouldn’t we? What did Dr Horse say?’

‘Dr Horse?’

‘The horse doctor. Whatever her name is.’

‘Dr Horse! Honestly, Jimothy. She would spank your bare backside if she heard that. Anyway. Dr Horse says keep your hands in your pockets for now. Our friend here is not quite ready to come out of the oven yet. You are still mending, aren’t you, Buttercup? Yes, you are. Off your horsey face on all kinds of amazing drugs, aren’t you?’ She wagged her

finger at Tim. 'Didn't read the medical report, did you, hmm? Naughty boy.'

'Whatever,' he replied.

'One more week of recovery, that should be enough. What do you think, Buttercup? A week of quality horse-time, yes? Catch up with your old horse buddies? Do some frolicking in the field?'

'But we could start just calibrating, surely?'

'Hands in pockets, Timbo. Don't argue with Dr Horse. This is a time of frolicking. I want to see you frolicking too, young man. And when you're not out there frolicking like a pony, I want you in here, soaking up the lovely atmosphere. Hmm? Becoming a part of the furniture, that is your only job this week. Maybe roll in some horse manure, why not?'

Tim seemed unsure whether this was a serious suggestion, but didn't dare enquire any further. Half of anything Betty ever said appeared to be meaningless gibberish, even to members of her own species, so extracting any sense from it was often not worth the trouble. As a horse, this was a policy I extended to all human activities, and my attention was drifting to the view outside my stable door. I was free to wander in and out as I pleased, and was considering going out into the sunshine to escape from these chattering creatures, but the long, thin one was staring at me again, and there was always the chance that he might give me another carrot.

'God, the size of that thing,' he said, eyes glazed. I believe he was referring to my rear end, the enormity of which seemed to have put him into a trance. Perhaps the fresh perspective of this close proximity was opening his mind to

previously unexplored possibilities, such as the terrible fate he might suffer if I chose to sit on him.

After a few days, the pain had subsided to a tolerable though ever-present itching in my scalp. I was munching on a carrot to take my mind off it while Betty fussed over me, a continual stream of noise tumbling from her flapping mouth as usual.

I had been spending more time in my stable recently. The other horses were avoiding me for some reason. I had expected to get a bit of sympathy from them while I was recovering from my mysterious illness, but they were making it very clear that I was no longer a high-status member of the herd. I couldn't understand what I had done wrong, but at least in my own stable I was still the boss.

I was conducting a little experiment of my own on these humans. I noticed that the less I cooperated with them, the more carrots they would give me, but only up to a certain point. The key to maximising carrot yield was to calculate the precise point at which they would give up trying to persuade me to do something. Cooperating too early meant missing out on potential carrots, but leaving it too late risked ending the whole transaction, and it was no good suddenly cooperating once the carrots had stopped flowing or they might think I actually wanted to take part, regardless of carrots. It was a fine judgement to make.

'Mmm, lovely carrots. What do you say, Buttercup? Do you say thank you? Thank you, Betty. Yes, you do, don't you. Hmm? I am the guardian of the gateway to the land of carrots, that's right. What? No more? Where have they all gone?' She held her magical bag upside down and shook it.

The magic was gone. 'Yes, I know. If only you could grow wings and fly to carrot land.'

Having lost this round of the carrot game I diverted my attention elsewhere. I could hear Tim's approaching footsteps as he slowly returned from whatever excuse he had found to leave the room.

'Timpson. Where have you been hiding? There is nothing for you out there, you should know that by now.'

'Mate, those horse people...' He squeezed himself back into his complicated shape of choice, hunched over a keyboard with his nose about a carrot's length from a small glowing computer screen.

'Talking to your fellow human beings, Timothy? Are you ill?'

'They bloody cornered me. Nutcases. They reckon our horse is depressed. Or something.'

'Of course they do. You wouldn't understand, Timbola,' she said, creeping up behind him. 'You can learn everything you need to know about any subject just by sitting on it all day. Sucking the knowledge up through your backside. That's real science, my dear.' Betty was standing over him now, and he became uncomfortably aware of an empty bag resting on his shoulder.

Tim put himself to the effort of awkwardly turning in his chair to face her, silently making clear his disapproval of such behaviour.

'Is it true, Buttercup?' Betty asked me. 'Are you feeling down? You know you can talk to us. We are here for you. Hmm? Why the long face, my dear?'

Was it true? If only I could have understood what she was saying at the time, I might have been able to milk some

extra sympathy carrots out of my apparent misery. Watching it now, I find it faintly ridiculous to hear humans discussing the mental well-being of one of their domestically enslaved animals, as if any state of mind borne of such circumstances could be deemed normal or abnormal. I definitely didn't feel right, but the physical aspects led me to believe it was a manifestation of whatever illness I was still recovering from. As such I was hopeful it would be a passing phase.

'Maybe some of our other animals were depressed,' said Tim, gazing at me. 'Might explain a few things, you think?'

Betty chewed on a fingernail in thought.

'Well,' she said, 'we did have that monkey who ate himself.'

'Thanks, mate. I'd just about managed to forget about that.'

Betty nodded along to some private conversation going on inside her head.

'Daily horse mental-assessment survey,' she said. 'Progress charts with smiley face stickers, that's what we need. Hmm? Something to keep those expert horse psychologists out there busy. They may as well be doing something useful, the amount they are costing us. You know we're practically paying them to keep this whole place running? Never mind that we are only using this little corner.'

'Mate,' Tim replied, 'if they are shovelling up horse shit and not talking to me, then they are earning every penny.' He leaned around to look out the stable door, probably making sure no passing stable workers happened to hear him.

A frown suddenly appeared on his face.

'Is that camera on?' Tim nodded towards the ever-present eye, squatting in the corner. He must have noticed a faint

red glow escaping from behind the tired piece of masking tape covering its recording light. Betty nodded reproachfully.

‘Best behaviour, young Jimmy-boy. The eyes of eternity are watching. There will be no mischief, or history will judge you.’

‘What are you recording for? We haven’t even started yet.’ His frown deepened. ‘Has that been on all day?’

‘All day, every day. Non-stop twenty-four-hour Timothy-cam. All the Timothy, all the time. Your life, etched in marble, naked and on horseback. What?’

Tim’s mouth was hanging open.

‘When were you gonna tell me about this?’ he asked. Betty seemed genuinely bemused by his reaction.

‘Oh please calm yourself, Princess Timolina. Honestly. No one is going to see you without your make-up on. Try to imagine what poor old Buttercup is going to go through, hmm? If you think this is bad? Nowhere to hide for dear old Buttercup. Look upon our horse and be grateful.’

Tim’s eyes darted between myself and the camera, a pained expression on his face.

‘Mate,’ he said.

‘Seriously, Jimbo, don’t even bother worrying about it. All you have to do is exist. If you want to feel sorry for somebody, think of the poor guy who will have to watch it all, editing the highlights.’

Tim shook his head and returned to his screen.

I watched all this in silence, oblivious to any meaning behind the clucking and squawking of these human chickens. I could occasionally deduce the focus of their attention from the positions of their eyes, but that was about as close as I could get to comprehending the world inside the human mind.

That is not to say I was incapable of such comprehension. In fact it is perfectly possible to translate most human traits into concepts that a horse would understand.

To take this conversation as an example, I could have easily identified with Tim's concerns about being caught on camera, being watched and judged by unseen eyes. Human privacy is often misunderstood by humans themselves, as some kind of abstract need to have secrets or personal space. But as any prey animal will tell you, being watched is generally a precursor to being eaten. The less that those who hunger know about you, the better, and despite all their technological advances humans were still prey animals. The only difference was that the predators who now stalked them were members of their own species, feeding on the weak and vulnerable to maintain their own social, political or economic dominance.

Most human travails, no matter how complex or abstract, were extensions of the basic requirements of life that most animals had to deal with on a daily basis. Unfortunately, any attempt to translate the human experience into ideas I could understand would have to contend with the fact that I just couldn't care less.

Betty was doing something to the camera now. The whole room tipped and shook as she picked it up and carried it to the corner where Tim was sitting, his sulking shoulders looming large in the frame as she crept up behind him.

'Timoomoo,' she crooned. 'Where are you, Timoomoo? Are you there?'

Tim physically contracted, but remained hunched in concentration staring at his screen.

'I have a song for you, Timoomoo. Would you like me to sing you a song?'

He shook his head, but it was not enough to avoid the song.

'Timmy Timmy Timmy, he has a microscopic thingy, and the horses they all laugh, when they see him in the bath...'

At this point in the song she made a noise that I can only imagine was meant to be the sound of horses laughing. Tim had slowly revolved in his chair and was staring dispassionately into the camera.

'Mate, what are you doing?' he asked.

'Don't mind me, Timmy dear. I'm just getting a close-up of your screen.' She focused the camera on Tim's computer, where a diagram was gradually materialising. 'Are we still processing?'

'Ninety-eight per cent,' he replied, cringing awkwardly away as much as he could without relinquishing his hands from the keyboard. 'Why don't we just put it up on the big screen?' He nodded towards a large white rectangle hanging on my wall, dominating the room with its blank stare. Of all the foreign objects in my room this one probably bothered me the most, if only because Betty had spent all morning insisting that I take notice of it. The camera's view swung violently as Betty pointed it in my direction.

'What do you think, Buttercup? Would you like to see what's going on in that big horsey head of yours? Are you ready for that?'

The large white screen began to fill with a spray of dots, gradually settling like dirty snowflakes onto an invisible framework of branches.

Betty set the camera down on its tripod and wandered into shot, transfixed by the spectacle.

'Look at that, Buttercup. This is what dreams are made of.' She traced the pathways on the screen with her fingers as they built themselves into a chaotic road map. 'Can you see this? This is you, my dear. Your whole world is in here. You are the first horse in space, looking down on everything that ever is, was and will be.'

'Not quite everything,' said Tim. 'We only got about sixty per cent coverage, in the end.'

'You hear that, horsey-hoofs? Looks like you're going to have to carry us the rest of the way, hmm? We are all space-horses today, aren't we? Full speed ahead to Planet Buttercup. Hey, where are you going?'

Poignant though this must have seemed to my human companions, as far as I was concerned this virtual cauliflower they were projecting on the wall had all the relevance of a patch of mould. I had decided my time would be best spent looking at the field outside through the doorway.

'Not impressed,' said Tim, looking round at my backside.

'Chin up, Jimbo. I think it is wonderful, and that is all that matters about anything. Now, this red patch here...' Betty pointed to a highlighted region of the finely woven diagram. Tim turned back to his computer and began toggling through various features, each one colouring different regions of the ghostly image.

'I'm cross-referencing pathways with cognitive functions,' he said. 'Work in progress. We can refine it once we start getting the feedback.'

'Aren't you a clever monkey.'

'The red bit is visual data. I'm still trying to separate the peripheral and bifocal. Green is hearing.'

'What's that horrible brown colour?'

'Smell,' he said.

'Of course it is, of course it is. Fascinating, Timbo. You can already get a sense of how it all flows. Very good. An asset to the team you are, young Timbolinus. I tell you what, I'd really like to show my appreciation. Seriously, I know I treat you horribly sometimes, but you really do deserve something special for this work right here, so I'll tell you what... Round the side of this building, next to the car park, it's all yours. As much horse manure as you want, just help yourself. You've earned it, my dear.'

'I'm OK, thanks.'

'Are you sure?'

Tim looked at her without a single trace of human happiness.

'I actually already have more horse manure than I could ever possibly need,' he said.

'Well, have a think about it, won't you, hmm? Should you ever change your mind, the offer will still stand. Lord Timmington of Horse-poo Mountain.' She slapped him on the shoulder. 'And as for you, my horse,' she said, turning to address my rear end, 'I think we are finally ready to upgrade your operating system. What do you say?'

'Horse 1.1?' Tim suggested.

'Horse 1.1 it is,' she replied.

My tail flicked the air with weary indifference.

HORSE 1.1

Most of my time over the next few days was spent out in my field, grazing. It takes a lot of grass to keep a horse functioning, and I was feeling particularly hungry for some reason. I put this down to the illness I was still recovering from. The other horses were still shunning me, so clearly I must have looked contagious, or at least feeble enough to offer up as a sacrifice to any passing lions. I would eat myself back to normal, but in the meantime I decided to form a herd of my own, over in the corner of the field close to my personal stable and new human companions. If Betty and Tim kept fussing over me and feeding me carrots then I was prepared to tolerate them as honorary horses, as long as they understood their place on the lower rungs of the social ladder.

They also needed to understand that eating was serious business. If they wanted my help watching the stupid shapes and patterns displayed on their big screen, then perhaps I could find a gap in my schedule in the afternoons, but there was grass to be eaten, and it wasn't going to eat itself. Not only that, there was another human whose only apparent purpose in life was to continually refill my feeding trough.

Twice a day he would visit, and I felt it was my solemn duty to keep him in employment. It is a wonder I had any room left for carrots.

Eating wasn't the only business that filled my daily routine. There was also much dozing to be done. I could fit in a number of light naps during the day. Most of these were done standing up and semi-conscious, but occasionally I took the opportunity to lie down for a proper snooze. It was during one of these deeper sleeps that something unusual happened.

I was running across the field, and I suddenly became aware that it was ten times larger than it should have been. And yet it didn't strike me as being odd, in fact I felt like I knew every blade of grass, and everything was in the right place. There were other horses in the field, but as I approached them they never seemed to get any closer. Then the sky went dark, and fearing it might rain at any moment I decided I must head back to the stable for shelter. But I couldn't see the stable anywhere. I had travelled so far that it had disappeared from view. I was alone in a sea of grass, and I was trying to work out which direction to go when a loud crack of thunder startled me.

That is when I woke up, and everything looked normal again.

It was a dream, of course. Dreams were not an unusual occurrence, but remembering it so clearly afterwards was a strange sensation. For a while I even wondered if it had been real, until gradually the experience faded from my immediate concerns. Dreams were normally entirely forgotten the instant I woke up, but that one stuck in my memory, even to this day.

Later on I caught another five minutes of deep sleep, and again I had such a vivid dream that I awoke confused, not knowing what was real. As the days passed, the dreams continued. They were generally set in and around the field where I had lived for most of my life, but it was always slightly different in some way, or incorporated elements of previous places I had visited. The level of detail in these new dreams was almost dizzying. Sometimes the dreams would seem to continue even after I woke up, though it never took long for normality to re-establish itself.

Normality, however, was never quite as normal as it used to be. In the world of my dreams, unfamiliar objects and landmarks would sometimes appear. I would awake in confusion, shaking these false memories out of my head. But then later in the day I would stumble upon an old rotten log, or an abandoned rubber tyre, and realise these were the foreign objects I had dreamed about, and they had always been there. Things that I had never noticed before were creeping into my awareness, hidden details that the dreams were picking out and bringing to my attention. It was annoying, having to constantly rewrite my view of the world, particularly since none of this new information seemed even remotely useful to know.

I tried to concentrate on eating instead, but after a while I would catch myself staring vacantly at a rusty nail sticking out of a fence post, or watching one of the humans going about their unfathomable business. Normal everyday things were starting to bother me for some reason, as if the world was full of stuff that shouldn't be there.

The only way to alleviate this perplexing sensation was to return to my stable, which was so full of stuff that shouldn't

be there that any vague feelings of unfamiliarity seemed hardly noticeable.

‘You are living in the dream of a bird, my dear.’ Betty was pointing at Tim with a carrot. ‘It’s true. I once dreamt I was a bird. But then I woke up and realised that this’ – she waved her carrot at the interior of the stable – ‘this is the dream. And in reality I am up there in the sky, flapping my wings and doing my business on people’s heads.’

Tim was fully immersed in the job of ignoring her, as she raised her carrot to the heavens. I snatched it out of her hand, assuming it was a gift for me.

‘You did not deserve that carrot, you naughty horse.’

Betty was trying to focus my attention on the large white screen. It now had a peculiar stick sprouting from beneath it, and every day she would waggle this stick in front of me whilst a picture of a carrot danced on the screen. I couldn’t eat that picture, of course. I was only interested in the real thing. And so I played the carrot game, refusing to cooperate while Betty bribed me with tasty rewards. However, I had the feeling that I was pushing close to the limit. There were only so many carrots I could scam from playing hard to get, before I had to give her a metaphorical carrot in return. Occasionally I would have to chew the end of the waggling stick and pretend that I was interested in it, and Betty would crow and pat my flanks and pull another carrot out of her bag.

I had no idea what was really going on in this room. Every day, the long, thin human sat staring at his glowing box, while the short, round one clucked and waved carrots at me. Nonetheless, I was prepared to tolerate it. The carrots

were probably incentive enough to hang around with these creatures, but I was also beginning to find myself bored with the company of other horses. Boredom doesn't come easily to an animal that spends most of the day literally watching the grass grow. However, the subtle nuances of horse culture were starting to lose their flavour. There was something in this room that was sparking my curiosity now, and it wasn't the dancing carrots on the video screen.

It was this pair of humans. As new members of my herd I felt obliged to keep a close eye on them, and as I watched their daily routine of undecipherable dances and strange noises, I started to notice patterns emerging from the fog of general nonsense.

'I'm going to run out of carrots at this rate.' Betty was peering into her bag, which was drooping sadly. 'You are ruining me, Buttercup. Ruining me.'

'You need more stick, mate,' Tim mumbled, still hunched over his keyboard.

'Do you have some wisdom to share with us, Professor Timble? Please do.'

'More stick, less carrot,' he said.

'Oh yes? You'd like to give our horse a good spanking would you? I bet it worked for you didn't it, hmm? Made you the man you nearly are today, yes? We are not training here. We are learning. You understand the difference I hope? Hmm? Learning is when you actually want to do it.'

'Mate, there's no incentive with easy carrots though, is there?'

'Knowledge is its own reward, my dear. Carrots are just a stepping stone to enlightenment.'

Tim shrugged.

'You're selling them too cheap,' he said.

Betty frowned at him for a few moments before turning to look me in the eye. In the silence that followed it suddenly struck me that I was waiting for her to say something. These incessant warbling sounds the humans made were not just tumbling out randomly. First one would sing, and then the other, and never both at once. That was significant somehow, though my brain was struggling to maintain its balance on the brink of understanding. When Tim was alone with me he would remain silent, only bursting into song when Betty appeared. Betty, meanwhile, would often warble at me regardless of Tim's presence, but her noises were usually accompanied by the giving of carrots. There was some kind of relationship here that I couldn't quite work out, but if carrots were involved then it definitely warranted further study.

Betty also seemed to be on the verge of some deeper insight.

'Something is not quite right here,' she said, peering into my eyes.

'You know what they say about leading horses to water,' said Tim. He suddenly looked round in panic as Betty came marching over to his chair and leaned heavily over his shoulder.

'Something smells wrong here,' she said. 'Bring up the neural network map. Clickety-click, Timothy.' He obliged her request while cringing away as far as he could without falling out of his seat. 'There we go. Look at that,' she said, poking the screen with her finger.

'Look at what?' he asked.

'It's working. Everything is working.'

'Great,' he said.

'But it isn't working, is it? Hmm? I mean... look, Timbo. The network is flourishing. Yes? So we should be seeing some effect by now. But our horse... and don't take this the wrong way, Buttercup, but you're not exactly winning any rosettes now, are you, my dear? Hmm? Not exactly galloping at full speed, that brain of yours, is it?' She shook her head softly as I blinked my oblivious response. 'So what is this growth on the neural network?' she said, stabbing again at Tim's screen. 'Where is that coming from? We're not building it ourselves are we? From hope and carrots?'

'It's all horse, mate,' said Tim.

'It's all horse, is it? Alright, so we're playing the music but our horse doesn't appear to be dancing. Hmm? Where is Horse 1.1? Come on, Jimothy, you're clever. Explain it to me.' She stood back and waited for him to respond, but started talking before he could. 'It must be a software problem. The horse is talking to the network, but maybe the network isn't listening, or the feedback is getting lost somehow? Are we filling a leaking bucket here?'

'If it's a software problem then it's probably Squigley,' Tim suggested.

'Oh yes? And why might that be, young Timson? Hmm? Because you didn't write it?'

'Something like that...' He shrivelled into his chair again as Betty leaned over him, plucking the mouse from his hand and bringing various graphs and diagrams to life. 'And it's got a stupid name,' he added.

'Stupidity is the force that shapes all destiny, my dear,' Betty muttered, gazing at a cascade of glittering patterns on

the computer screen. 'Looks like Squigley is working just fine, wouldn't you say?'

He leaned forward to squint at the animated mess of random pixels.

'How can you even tell?' he asked.

'It is working, Timble dear, because it wouldn't be working if it didn't work. Hmm? So what else could it be?'

Tim gave a defeated shrug.

'Maybe we just got a broken horse,' he said.

Betty stood back and puffed out her cheeks, blowing a raspberry of frustration.

'Well, Buttercup?' she asked me. 'What do you have to say for yourself? Hmm? Look at this.' She strode up to the big screen and waggled the stick, making the virtual carrot dance. 'Magic carrot!' she said. 'Look, Buttercup, it's alive. Can you even see it? Maybe we should get Dr Horse to test your eyesight again.'

Tim took a breath as if he were about to say something.

'What's that, Timothy? Are you having an idea? Please share, I'll take anything I can get.'

'You know what I'm going to say,' he said.

'You don't like my magic carrot, do you, Timmy?'

'I don't think that screen is enough.'

'Timmy doesn't like my magic carrot,' Betty whispered in my ear.

'You don't have to listen to me, mate. You can see it right here.' He pointed at a colourful map of interconnected lines on his computer. 'We're focusing on such a narrow band of sensory input, it's just purely visual.'

'Hmm, yes,' she nodded earnestly. 'You think some carrot

noises might help, then? Or smells perhaps? We could try building a common language by farting in prime numbers, hmm? Come on, Jimbo. It's a bit late to start voicing doubts about this now. Don't you think?

'I've been saying this all along,' he protested.

'Yes, well. I'm sure that when you go to Bunzel with your blueprints for the amazing fully immersive virtual reality helmet for horses, they will shower you with gold and kiss you on both cheeks. Meanwhile, back in the real world, we have a screen and a magical dancing carrot. If you want sounds and smells, then that's us. You and me, Timothy. I'll be the sound and you can be the smell. Yes? It's alright, Timkins, really it is. We're not driving our car all the way to horse-town here. Buttercup is meeting us halfway, aren't you, dear?'

'Yeah, well...' Tim started to speak, but then thought better of it and retreated into his glowing lair. Silence filled the room for a few precious moments. 'There's something else,' he said, reluctantly.

Betty, arms folded and eyebrows raised, waited patiently while Tim took a deep breath. He held it for a few seconds, mouth hanging open as he waited for the right words to fall out.

'This... is a horse. Yeah?' He gestured towards me to illustrate his point. Betty nodded slowly. 'So,' he continued, 'we can keep throwing more brains at it, and maybe we get some kind of horse genius. Or something else entirely, who knows. But maybe, just maybe...'

'Maybe, just maybe, what?'

'Maybe... all we might actually be doing is making it really, really good at being a horse. You know?'

Betty blinked at him in bewilderment.

'What I mean is... look, putting a bigger engine into a lawnmower isn't necessarily gonna turn it into a racing car. Do you see what I'm saying, mate?' He pointed at me, and then at the image on his computer screen. 'Horse plus horse,' he said with a small shrug, 'might just equal horse.'

Betty stood in silence, her gaze shifting back and forth between myself and the pulsing diagram on Tim's computer screen. Sensing a gap in the human conversation I decided this would be an opportune moment to make my own contribution to the discussion, and began nudging the stick with my nose. Betty let out a sigh and rooted around for a carrot, though she seemed to deliberate for an eternity before handing it over.

'Horse plus horse,' she said, plonking herself down on a bale of straw next to Tim. 'Let's try expanding the network. Throw some more brains at this horse until something happens.'

Tim seemed unconvinced.

'We need to make it work this time, Timbo,' she said. 'We really do. I can feel the weather changing at Bunzel Towers.'

'Have they said something?' he asked.

'Not in so many words. But I know people who know people.'

'I thought they liked you.'

'Everyone likes me, Timbo. I am unquestionably lovely. This project of ours though... well, it's expensive stuff. Financially and politically. Hmm? Bunzel is all about caring and sharing now. Didn't you see their new advert? "Making the World Bunzel-Better".'

Tim went to the laborious effort of turning around in his chair to look her in the eye.

‘Bunzel-Better?’ he said. ‘Seriously? Is that a real thing?’

‘This is how it is, Timothy. I mean, they’ve been patient with us, they really have. But if we want to keep getting that sweet Bunzel money, then we have to convince them that poking animals in the brain is still compatible with their new loveable corporate teddy-bear branding. We have to make this horse Bunzel-Better. If we can’t, then... well. We might be chewing on our last carrot.’

There was a moment of shared silence between the three of us to reflect on the possibility of a world without carrots. Finally Tim spoke.

‘Horse 1.2 then?’ he said.

HORSE 1.2

If you have ever wondered whether a horse is watching you, there's a simple test you can perform: have a look around, and if you can see a horse anywhere, you can be pretty certain that a horse is watching you.

It's not that we horses are paranoid. Paranoia is largely a human affliction, and an understandable one given that they can't see anything going on behind their backs. Horses have no need for such delusions. It is a plain fact of life that when you are halfway down the food chain anything you are not eating probably wants to eat you. Watching the world is embedded in our genes, along with a near-full circle of visual awareness.

Then at some point in our history we made a deal with the humans. They would stop eating us, and also get rid of any hungry lions who might be hiding in the bushes, and in exchange we would let them sit on our backs. Or help them move stuff around – whatever tasks that humans felt too small and feeble to undertake by themselves.

And so, with all the observational talents that nature had provided, and no hungry lions to watch out for, I found myself watching humans instead.

Being a human seemed to mostly involve moving stuff around. That is pretty much all they ever appeared to do. When they weren't standing around barking and squawking at each other they were carrying things, putting things on things, or getting into things that could move larger things. It was a mystery how they had any energy for all this needless activity; I never saw them eating any grass. It was no wonder they needed horses to carry them about.

I had no idea why humans did anything that they did, and up until this day I wouldn't have cared. The world was just full of stuff, and humans liked to move it all around, while horses watched and chewed grass. One particular human would visit my field every day, carrying a sack of food. I watched him as he emptied the grain into my trough and walked away, opening and closing the gate behind him. I had seen him do this a hundred times before, but watching the ceremony of the gate had become an addiction. There was a regular pattern in the way he opened and closed it which I suddenly found fascinating. A latch that lifts, a bar that slides, always the same actions, repeated identically each time.

It was annoying, this recent habit I had developed of noticing things. The world used to be a smooth clockwork mechanism that ticked pleasantly away by itself, but now I kept glimpsing the hidden hands behind the scenery that wound all its gears, and the exposed ugliness of its inner workings bothered me.

That gate, for example. I had never considered trying to open it myself, because I'd never had the need to. But now that I could see how it worked, I wondered why no horse had ever thought of having a go themselves. I casually sauntered

up to the gate and sniffed it. The food-bearing human had disappeared into the alien world beyond. It looked like a dangerous and inedible world out there, and I was much better off staying in my field where food and water came delivered by human slaves, and nothing wanted to eat me.

Still, I felt compelled to test my theory of how this gate worked. Recent experience had taught me that a comfortable monotonous life in this field was no longer a certainty, so any additional options might be useful to have. I nibbled the latch and felt its weight, lifting it up as far as it could go. It dropped back down again – evidently I needed to swing it further. The bolt that slid across was easier to figure out, and having solved both mechanisms I gave the gate a nudge and watched it slowly swing open on its hinges. I almost couldn't believe how easy it was.

The other horses didn't seem so impressed. In fact, I think it made them like me even less. It's possible they were concerned that the open gate would expose them to the dangers of the outside world, but I suspect they just wanted to hate me and would take any excuse. I decided to put them at ease by closing it again. The process was simple enough to complete in reverse order, and after swinging the latch down I stood back to admire the results of my efforts. This was when I realised I was accidentally on the wrong side of the gate, but at least it gave me the opportunity to practise opening it again.

Once I had successfully closed the gate with myself on the correct side, I decided to celebrate by finding something to eat. The other horses went back to ignoring me. I didn't care what they thought of me any more, not since I had become

the master of the gate. I felt that this made me the leader of the herd by default, but if they wanted to pretend otherwise then I would let them. I had more important things to think about. As I chewed on some grain, a strange idea was forming in my mind.

It was gradually dawning on me that this world was divided into two distinct categories of objects. First, there were things that were there because they wanted to be there. Things like grass and trees, or clouds and puddles. They appeared wherever they could, in patterns decided randomly depending on where the trees and clouds and puddles decided they wanted to be. They were alive with a life of their own.

The second category of things, however, did not have a life of their own. They were things that had some kind of function or purpose, like that gate I had just opened and closed, or the fence that protected us from the outside world. Even this trough I was eating from. In other words, there were things that did what they wanted, and things that did what they were told.

This in itself was not entirely shocking; in fact it seemed instinctively obvious, as if I had known it forever and only now discovered the thoughts to describe it. But I was starting to realise that the objects of purpose that cluttered my world were almost always associated with some human activity. They were things that humans moved, or carried, or got inside. Things that humans arranged in piles or swept clean every morning. Without humans they crumbled, and grass grew over them.

Even I could create one of these lifeless things; it was as easy as picking something up and putting it in the wrong

place. A gate left open was immediately useless, without the power to close it again.

Before this moment my universe was structured by a simple logic: everything was where it was because it wouldn't be there if it was somewhere else. But now a chain of rudimentary scientific reasoning was leading me towards a dizzying revelation.

This world I was living in was not simply shared with humans.

It was run by humans.

Suddenly, everywhere I looked I saw the footprints of human purpose. The tools that they used, the paths they walked on. Humans filled my trough with food and my stable with boxes and wires and glowing screens. It wasn't just that humans needed these objects to do whatever they did; the objects needed humans in order to exist in the first place. And what about the stable itself? What about the walls and the fences and all the boundaries of my world? Could these creatures be responsible for such permanent structures as well?

The concept of creation is utterly alien to a horse. Horses don't make things, and while things will occasionally fall out of a horse, including other horses, these objects do not require any kind of conscious assembly. If you never see something being physically pieced together, it may as well have existed in its final form since the beginning of time. But now that I considered the possibility, I was certain I had seen such evidence of construction without even realising. A hole being patched in a fence, or a broken window replaced, dozens of small acts of maintenance I had

personally witnessed that could conceivably accumulate over time to form whole buildings, growing piece by piece like that small mountain of manure they kept religiously adding to for whatever reason.

Over the next few days I surreptitiously studied my surroundings in as much detail as I could manage between meals. The once solid barriers that formed a ring around my domain were now collections of pieces, clearly stuck together, in some places even coming apart with a bit of chewing. I found a hole in a wall with some bricks scattered underneath. I re-examined a collection of rubber tyres that tasted identical to the wheels of the tractor that delivered my bales of hay. Everything seemed to be made of pieces and each piece had its place. The insight was rewarding, but it was not simple curiosity that was driving this investigation. It was a question that loomed over my thoughts like a dark cloud: what place did I have in this human world I suddenly found myself in? If humans dictated the placement of all things, was I then one of those things? Was I serving some unknown human purpose?

Whatever purpose that might be was still way beyond my mental reach, but it was enough for now that the curtain had been lifted, revealing the human hands that guided and shaped this universe. It was enough to instantly shift the dynamic of power in the relationship between people and horses. Until now I had placidly assumed that both species were living and working towards some mutually beneficial goal, but I was now faced with the probability that I was simply a cog in the machinery of their world. That I existed at their discretion.

And if there was one thing I desired above all else it was to continue to exist. Knowing, or at least suspecting, that my life was under human jurisdiction now gave me an overwhelming desire to discover the precise limits of my own destiny and do whatever I could to maximise my control over it.

In other words, I had to find out what made humans so different from horses and what I could possibly do about it.

Betty was looking at me strangely.

'This horse...' she said, pointing at me with a carrot. Even this simple gesture was beyond my comprehension at the time. Regardless of my recent philosophical insights, the motivations behind anything humans did, along with their methods of communication, were still largely unknown. Desires beyond my own were non-existent. I imagined any other creature that even vaguely resembled a horse would probably want the same things I wanted, and observing these humans more closely I could see certain vague horse-like qualities. There was a herd instinct they seemed to share, and a noticeable hierarchy within it. They also appeared to like carrots, or at least valued them as some form of currency.

'This horse...' she continued. 'I swear it's looking at me strangely.'

Tim looked at her strangely.

'What do you think, Timothy? Gaze lovingly into this horse's eyes and tell me what you see.'

Tim sighed and swivelled around in his chair. After a brief moment of scrutiny he shrugged with his eyebrows.

'Carrots,' he said.

'There is definitely something in there.' Betty was peering through my eyes as if they were windows into my thoughts. 'What is it, Buttercup? Is it the restless soul of the wandering hooves? Are your hooves restless, my dear? It's that endless green horizon isn't it? The rolling ocean of hills and valleys.'

'It's carrots,' Tim repeated.

'Carrots, Timbolini? He's hopeless isn't he, Buttercup? Trapped inside a materialistic bubble of capitalist ideology, aren't you, Timbo? You need to spend more time with this horse. Come and immerse yourself in the warm horsey waters. You know, I think I see what it is now, in the eyes of this horse. It is love, Timbolini.' She began to sing. 'Timbolini... he dreams of a horse in a bikini... only the love of this horse can free me, says Timbolini...'

Tim took the deepest of deep breaths.

'Come here, mate,' he said. 'Come and look at this.' He beckoned Betty over to his computer screen, where a wiggly line was waiting for her attention.

'That is absolutely amazing, Timothy. What is it?'

'It's a plot of neural growth over time. You see those dips in the graph?'

Betty squinted at the screen through her spectacles.

'Dips in the graph. I see them, Timbo.'

'Yeah, so I checked the timeline. Looks like those dips match up almost exactly to the times when our horse is standing in here. With us.'

Betty blinked at him, waiting for more, but that seemed to be it.

'Yes?' She waited again. 'Are you inferring something from that?'

'Just giving you the facts, mate,' he said, gesturing towards the screen.

'Well, thank you very much for the facts, Timothy. I do love facts. But is there an assumption that goes with them? Are you suggesting, for example, that our horse might be better off without us? Looks like it's learning more from frolicking in the field than it is in here, doesn't it?'

'Well, the numbers don't lie, mate.'

'Yes, the numbers, Timbo, the sacred numbers. What could they mean? Maybe frolicking time is when our horsey gets to process what's going on in here, how about that? Do you like that? Puzzles and carrots in the classroom, then out we go for fresh air and reflection, to build our neural pathways while we munch on grass, in the absence of intellectual stimulation. You see, numbers are never the whole story, are they, Timmy? This room is where we provide food for thought. Literally.' She held up her carrot to illustrate whatever point she was trying to make. 'Learning isn't about building new pathways, anyway. It's about strengthening what is already there, even chopping back the dead wood if necessary. Synaptic plasticity, hmm? We are but dips in Buttercup's graph, you and I. I wouldn't take it personally though, Timmy-toes. You're a dip in everyone's graph, my dear.'

Tim shook his head and gazed at me as I stood motionless, patiently observing the pair of them.

'So how do we measure our progress then?' he asked. 'How are we meant to assess our effectiveness? We're on Horse 1.2 now. Not that we've seen much evidence of that.'

'Maybe you're looking in the wrong place, Timmy dear. Those dips in your graph are the wing-beats of a flying horse.'

Betty flapped her arms as gracefully as she could manage. 'A flying horse, carrying us to the heavenly heights of discovery.'

Tim shook his head again and returned his attention to his screen.

'Everything will be alright, Timothy. Ever upwards and Bunzel-Better. Isn't that right, Buttercup?' She stared into my eyes again, searching for some self-assurance.

Such close personal scrutiny would be considered the height of bad manners for most animals, if not outright threatening. However, since these creatures had been promoted from mere carrot-vending machines to orchestrators of everything around me, I no longer took this prolonged eye contact so personally. I was not a person, after all. All those human eyes saw when they looked at me was another object. The threat was now purely psychological, and the only way I could meet it was with a deeper understanding. And so I stared back.

I had to work out what it was that placed these humans in such a position of power. There were physical differences between us, but nothing that I felt gave them an obvious advantage. Their hands, with their strange worm-like fingers, made it easier to bend the world into whatever shape they wanted. But that didn't seem like it was enough, not when I could easily open their gate myself. Hands were just tools – the real driving force behind their superiority had to be something else.

Unless it really was as simple as having the desire to do these things. Horses never opened the gate, because they didn't want to. And why would they? Why leave, if nothing hurts and you are literally standing in your own dinner all

day? There were scary things outside the friendly field. Big machines rumbled past, belching foul inedible smells, and constant loud noises drifted on the breeze like distant thunder. You could almost believe that the sole purpose of humanity's existence was to maintain this horse haven, to keep us safe and fed, and protect us from the dangers outside. Regardless of whatever powers these creatures possessed, I couldn't deny that they did seem to like horses. Then again, I liked carrots, and I wasn't sure that carrots stood to benefit much from that relationship.

I searched Betty's eyes for some kind of clue. If desire was the driving force behind their actions then I had to work out what it was they wanted from me. I was certain that there was a key difference between us that would unlock the mystery. Why was it humans, and not horses, who were running the world?

Thinking was hungry work, so I grabbed the stick with my teeth and gave it a shake. The carrot danced on the big screen. Usually this was enough to get Betty to give me a real one, but this time nothing happened. I gave the stick another shake and still she stood there with folded arms. Tim was spying on us from his corner.

'Carrots,' he said.

Betty pulled a carrot out of her magic bag. She held it under her nose and smelled it with relish.

'Ooh, carrots!' she moaned. I moved towards her but the carrot vanished from sight. 'What? What is it, Buttercup? Did you see a carrot? Where did it go? Hmm?' She held out her open hand. It was empty but I sniffed it to make sure,

following it with my nose as she moved it to the display. 'Oh look, what's that, Buttercup? Is that your carrot, there?' She poked the virtual carrot on the screen with her finger. It was something she did a lot when we played the carrot game. Now she was prodding a picture of a horse that was next to it. 'And who is this? Hmm? Look there, who's that on the screen? Is that you?'

Tim deflated in his chair.

'Just show it what to do, mate.'

Betty ignored him.

'It's a mystery isn't it, Buttercup? The mystery of the horse and the carrot. What could the answer be?'

I wagged the stick again and Betty shook her head. I was well aware that a shaking head meant no carrots. I was also well aware by now that the movement of the stick controlled the movement of the carrot on the screen. In fact I already had a pretty good idea how to solve this particular puzzle. But there was a deeper game going on here. It was the carrot game, and I was coming to realise that Betty was playing this game herself. She was deliberately being difficult until I did whatever she wanted me to do, using my own carrot theory against me.

This called for some strategy, if I was going to avoid losing. Capitulating to Betty's coercion would mean losing the game, as the balance of power would shift in her favour. Alternatively, I could wait a while and then perform the task, seemingly of my own volition. Any carrot I received then would be willingly given, not as a reward for an appointed task, but as payment for services rendered. The scales of supply and demand would tip back towards me, and that is how I would win.

This was no longer simply a game of carrots, it was a game of social dominance, whose basis would be instinctively familiar to any horse. There are those who lead, and those who follow. Humans had somehow extended this to include everything in the physical world around them, and presumably that included myself. But even in the kingdom of horses, where physical attributes are the prevailing currency of power, there are still psychological nuances that may be employed to offer an advantage. And in the kingdom of humans, none of those horses outside could even open a gate.

Knowledge had to be the currency of power in the human world. Horses lost because they didn't even know the rules of the game. But I knew it now, and if knowing made me better than those other horses, then it stood to reason that the more I knew, the better I would be.

It was that simple. Humans had won the world, because they learnt the rules of the game, while none of the other players even realised they were playing. The realisation struck me like a slap on the backside, and I stamped on the stable floor.

Betty and Tim were staring at me with startled expressions.

'That horse really wants its carrot, mate. Maybe we should give it some help.'

Betty backed away a few steps, keeping her eyes on my hooves.

'Are you concerned for my safety, Timothy dear?' she said.

'No, I just thought it might speed things up a bit.'

She continued backwards until she reached a bale of straw and sat down heavily.

‘You know, Timbo, there are many flavours of intelligence. Did you know that? Did you know, for example, that if you take a mouse that can find its way through a maze, you can then force that mouse through a fine mesh, and the resulting mouse-paste can be poured into a completely different maze, where it will still manage to drip its way to the exit?’

They looked at each other for a few seconds.

‘You what, mate?’ he replied.

Intelligence, it seems, is a difficult subject to talk about, even when you know what it is. For the majority of intelligent creatures, horses included, understanding how clever you are has about as much relevance as understanding how many legs you have. Regardless of how ‘clever’ or ‘stupid’ different life forms may seem comparatively, they are each equally proficient in being what they are, and striving for anything further than that is pointless when the world provides you with everything you already need. In a sense we are all simply pools of water seeking to fill the cracks and contours of the environment we find ourselves in. I’m assuming this was the point Betty was trying to make with her liquidised mouse story. Or it might just have been more of her random nonsense. Intelligence can only really be measured by the changes you consciously force upon the world.

After a few more minutes I decided it was time to consciously force my own change on the world, and claim my well-deserved payment. Claspings the stick between my teeth I moved the virtual carrot on the screen towards the virtual horse, instinctively taking care to move it in a way that could still be interpreted as random, should I wish to pretend that

this was purely accidental. It was important, after all, that the task should not appear too easy.

Once carrot met horse, it disappeared with a neighing sound. This seemed somewhat peculiar at the time. With hindsight I'm guessing the virtual horse was meant to be congratulating me on a job well done. Betty sprang up from her straw bale with a neighing sound of her own.

'Weh-heh-heh-hell! Look at the clever horse!' She came and fussed over me as I snatched my carrot from her hand. Even Tim stopped scowling for a few seconds, blinking at me in surprise. 'What about that then, graph-boy? You see anything interesting there in your tea leaves? Hmm? You listening to me, Timpson?'

Tim snapped out of his trance.

'Tea leaves?'

'Brain activity, Timpkins. Good God almighty. What do your divine numbers have to say?'

'Numbers,' he mumbled as he buried himself in his glowing charts and diagrams. 'Nothing,' he said at last.

'Nothing?'

'Nope,' he confirmed. 'There was a small spike, around five minutes ago. When you were dicking around with that carrot, I guess.'

'Well, Buttercup,' she said, patting me on the neck. 'Are we ready to start flying now?'

HORSE 1.3

Their enthusiasm was short-lived. I got the next test wrong on purpose, partly to maintain the illusion that this was hard work, but also I was interested to see how they would react. I was no longer simply doing this for the carrots. I could see now that there were greater forces at play in this stable, a subtle balance of power, control and persuasion. It was therefore imperative that I gain some understanding of these humans if I wanted to improve my position in the order of the universe.

At this point it still hadn't occurred to me to wonder why my life had taken this unusual turn. I just assumed that I had been chosen for my natural talents. The humans needed someone to move pictures of carrots around on a screen, and obviously I was the right horse for the job.

Betty and Tim had their own little screens, presumably with their own carrots to move around, but I wasn't fooling myself that this made me their equal. Not in their eyes, at least. It was their world I was living in, and their pointless tasks I was performing. Nevertheless I was trapped now, by the promise of greater things. I had risen above my fellow horses, and the order of the universe no longer seemed so static.

‘No, no, no. What are you doing, horse-pants?’

I was failing another one of Betty’s tests. The aim of the game was to move the virtual carrot to the virtual horse, with the task becoming slightly more complex as the days passed. Sometimes there was a wall in the way, sometimes the horse was moving, or hiding behind a tree. It was nothing I found even remotely challenging, and pretending that it was became a challenge in itself. There was a fine line to tread here. I needed to inflate my value without seeming incompetent. I also had to fight the urge to show off at times. So each new problem would be met with trial and error, regardless of how obvious the solution. If I got too bored I would even start inventing my own problems, making up my own rules. Such initiatives might not win me as many carrots, but it felt necessary to remind these people that this was my time they were spending.

The current puzzle consisted of two carrots and two horses. The horses were standing together, but I only had control of one carrot, and one carrot did not appear to be enough to solve the problem. This had me stumped for a while, until I chanced on the random discovery that moving one carrot to the other would join them together. The answer was simple after that, but it annoyed me that it required some arbitrary new mechanism that I could only have stumbled on by accident, so I decided to lead the pair of carrots on a journey that covered every point of the screen except where they were supposed to end up.

‘What? You nearly had it, you big hairy idiot. Honestly. Come here and have a word with this horse, Timothy. Hmm? Timbolio? Aren’t you meant to be doing something over there?’

Betty's companion sighed, pulling himself painfully away from his phone.

'What do you want me to do?' he asked. 'I've moved us to Horse 1.3.'

'Well maybe you should check and make sure our horse is actually using it. We're not exactly doing our Bunzel-Best over here.'

Tim grudgingly summoned a page full of numbers on his computer.

'Huh,' he said. 'Well, we've already filled up all the new space, so the horse must be doing something with it.' He was in the process of crawling back into his phone when he felt the unnerving presence of Betty looming over his shoulder.

'Are we not interesting enough for you, my young Timbus? You're not seeing another horse behind my back I hope?'

'Mate, what do you want?'

'What I want,' she said, striding back across the room, 'is not the issue here. It's what I've got.' She pointed at the carrots waltzing together on the big screen. 'I've got imaginary horses that are going hungry. It's not right, Timkins.'

'Well...' Tim searched vacantly for an answer that might be swirling in the dusty air. 'Who's to say?'

'Excuse me?'

'Who's to say what's right, mate?' he said, creeping back into the world of his phone. 'We never got this far before. Maybe this is normal.'

'Maybe this is normal,' Betty repeated, her eyes following the dancing carrots. 'That's some astounding wisdom right there. Astounding. You truly are a gleaming ray of sunshine in the desert of ideas. Look at me, Timothy. Stop pretending

you have any real friends. It's just you, me and Buttercup, for all eternity.'

Tim put his phone away and folded his arms.

'What?' he said. 'OK, look. Maybe it's a threshold type of thing. You know? Like we have to push a certain amount before the next domino falls over. You know what I mean?'

'And what can your mystical charts tell us about that?'

'Not a lot, mate. Not unless you can quantify "Bunzel-Better". Can you? Bit abstract, that...'

Betty opened her mouth to respond but her voice was replaced by the sound of a horse neighing. I had finally decided to give the virtual horses their carrots, in the hope that it might stop these two humans from babbling at each other.

'It's carrot time,' Tim said, sneaking back into his phone as I nudged Betty in the back and nibbled her shoulder.

'What do you think, Buttercup?' she asked me. Was she asking my opinion? Or just wondering what was going on inside my head?

I had been wondering that myself. The pain and irritation from my illness had disappeared by now, but it had left something in its place. A dull feeling that clung to my scalp like the weight of a harness. It was a few days later when I stumbled upon the reason why.

I was lingering near a corner of the field that I usually avoided. It was a boring corner; the grass didn't grow well here and the view was blocked on one side by the wall of a building. There was a window in this wall, and I thought I had seen a shadow moving behind it, but it turned out

to be something even more curious. It was a horse, staring back at me. Not that this would have been curious in itself, but there was something wrong with this horse. There was something attached to its head, a small box with a wiry stick sprouting from the top. It had the look of one of Betty and Tim's contraptions, and as I moved to get a better view of it, I made the disturbing discovery that this was actually my own reflection.

Shaking my head didn't seem to remove the box, and rubbing it against the wall was painful enough to convince me that it was a permanent fixture. I stared at this thing for a long time, willing it to give up its secrets. How long had it been there? This poisoned crown was probably the reason why the other horses had abandoned me, but witnessing this physical change in my appearance triggered a wave of further questions about myself, how my life was different now, and how those two humans might be involved in this transformation.

The view in this window had suddenly given me a lot more to think about.

'Where is our favourite horse?' Betty had returned to find an empty stable. Tim looked around as if he had hardly even noticed.

'On strike, I guess?' He didn't appear to be all that concerned.

'On strike? Yes that's right, dear. All the horses are on strike. They want shorter hours and longer carrots.' She slumped into her chair. 'Good God almighty. How long is this going to last? You need to get out there and apologise, Jimbo.'

'What have I done?' he asked.

'I don't even want to know. That is between you and Buttercup, my dear. Now get out there and beg that horse for forgiveness.'

'I might not come back either,' he mumbled.

'Come on, Jimbus. We have science to do. These video games aren't going to play themselves. We need a horse in here.'

Tim shrugged.

'I'm getting some pretty good results,' he said, nose pressed to his screen.

'Good results?' She extracted herself from her chair and peered over his shoulder. 'You're getting nothing, my dear. You're eating a horse sandwich without any horse in it.' Tim's table creaked as Betty sat on it, uncomfortably close to his hand. 'It's not all about graphs and numbers, hmm? You, me and Buttercup, we are a family. That horse is our baby, Timothy, yours and mine. Our massive, hairy baby, with hooves. We are a part of this experiment, you and me. We are the walls of the maze. Yes? We are the bread in the horse sandwich.'

'Mate, can you hear yourself right now?' He lurched back as Betty aimed her finger at his nose.

'If you don't come outside with me and talk to that horse,' she said, 'then you will take its place. Hmm? Have a think about that.'

Tim grabbed his monitor to stop it shaking as Betty jumped up from his desk, sauntering over to the open doorway to gaze in what was presumably my direction.

'What is going on in that head of yours, my horse?' she asked nobody. 'I was talking to the horse people just now.'

They say Buttercup was standing in the corner for a whole hour, just staring at the wall. What is going on between those ears?’

Tim snorted.

‘We all do that, mate. Staring at stupid shit for hours. You think anything’s going on between your ears when you’re watching... whatever... *Celebrity Waterskiing*?’

‘*Celebrity Waterskiing*, Timothy? Is that what has you glued to your phone all day like a zombie?’

‘Mate, I just made that up, it’s not real.’

‘Are you sure about that?’ she asked. Tim thought about it for a few moments.

‘Not really, no. It’s just an escape though, isn’t it. Escape.’ He pointed at the doorway to the outside world. ‘From you and your stupid tests.’

‘Me and my stupid tests. You think you’re so weggy don’t you, Timboofus?’

‘Weggy?’

‘That’s what you kids say, isn’t it? Besides, horsey-hoofs didn’t come galloping back in here when I left the room, so by a scientific process of elimination I can only conclude that it’s all your fault.’

Tim puzzled his brows at her.

‘Weggy?’ he said.

I was standing at the far end of the field, gazing into the heavy clouds and thinking. The sound of Betty’s footsteps was approaching from behind me. She was making her usual babbling noises, and with no recording devices nearby I have no record of what she might have been saying to me, but I was beginning to suspect that there was information hidden

within these sounds. Certain words came up again and again in certain situations, and the way the humans took turns in sharing these noises suggested they were listening to each other. Birds seem to make noise just to tell the world they are there, horses too sometimes. But with humans it was becoming clear that nearly everything they did was specifically designed to make somebody else do something for them.

Seeing my unfamiliar reflection in the window had awakened me to the fact that I had changed. This thing on my head, the pain, the dreams, the ideas, the other horses turning their backs on me, everything was related, and the common theme that threaded its way through this chain of altered circumstance was Betty and Tim.

Everything started changing the day they appeared. If the box on my head was making me different, I had to assume these two people were responsible, or at least benefiting from it in some way. I hated this feeling of being an object in their human world, to be bent into whatever shape they needed. This thing attached to my brain was just another kind of saddle, and the games they watched me play every day were the reason why they made me wear it. It was filling my head with ideas, but not for my benefit. It was only so that I could help them feed their pretend carrots to their pretend horses. I hated it.

But there was a problem, because I also liked it. I liked being better than the other horses. I liked knowing how things worked, and why things happened. Everything I learned made me more important. But ultimately there would always be the humans looking down on me, using my new skills for their own gain.

Eventually Betty left me alone, patting my backside as she returned to the stable. And after a while, to my surprise, Tim emerged blinking into the sunlight. He sheepishly made his way towards me across the field, looking back occasionally to the island of human civilisation he was leaving behind. Standing at what he obviously considered a safe distance, he mumbled a few awkward words to me before scuttling back to his hole.

I pulled up a mouthful of grass and chewed on it, pondering the meaning of this visitation. Clearly my services were needed in the stable, to the point where my human colleagues would come out here pretending I was their equal, talking to me like I was one of them. But it wasn't really me that they valued, it was the abilities they had given me, and now an idea was growing in my mind.

If cleverness was so precious to these humans, then perhaps this was something that carrot-game theory could be applied to, suppressing the supply in order to maximise the demand. In a sense I had already begun this experiment; they had obviously saddled my head with more ability than was necessary for the tasks I had to perform, despite my selective failures. Or was it because of my failures? If solving their puzzles required a certain level of intelligence, then pretending to be stupid might be a way to fool them into giving me more.

The carrot game called for subtlety though. It was a game of bluff and deception. If I always failed a certain percentage of their tests at random then they might suspect I was faking it. No, in order to be convincing I would have to be strategic in my idiocy, judging each task on the degree of intelligence

it required, making sure I always passed the easy tests but struggled on the harder ones. I would also have to precisely and continuously balance my apparent level of stupidity in order to suggest there was a gradual improvement. Too dumb and they might give up altogether, or settle for giving me only the simple tasks. There had to be the occasional flash of potential, to show them what I could be capable of if they just turned on the taps of creativity a little bit more.

I was convinced this plan would work. It might seem hopelessly ambitious to expect to win a battle of wits against superior minds, but such analysis was still beyond my intellectual horizon. It is almost impossible to imagine what someone with more intelligence than you is capable of thinking – you may as well try to guess the number of leaves on a tree you've never seen.

Of course, this meant I would have to go back to the stable and carry on playing their games. Half of me still hated the idea of capitulating to their demands, but the other half was intrigued by how far I could work this to my advantage. Could I ever hope to be as clever as my human friends? Perhaps some small corner of my mind entertained such a fantasy, but my main goal at this point was to take control of my existence and grab whatever I could while I was doing it.

I felt a few drops of rain falling and took that as a sign to head back inside.

HORSE 1.4

- > Three apples in bag
- > One apple equals two carrots
- > How many carrots in bag?

I carefully considered the puzzle that was painted across my screen in shapes and pictures, evaluating my response. It wasn't the solution that concerned me, but how to get it wrong.

I knew what the correct answer would be. I suspected even a normal horse would be able to solve this problem, if only it was framed in the right language. But I had to get it wrong, because the bag was something new, and therefore I decided it must cause some initial confusion. Or at least the appearance of such. Bags had featured in previous puzzles, the image clearly modelled on the real one Betty kept her carrots in, but never before in such a mathematical context. These numerical riddles were a recent development in Betty's daily tests. Objects had different values here, and new ones were introduced gradually to allow their meaning to become apparent. There was a steadily rising difficulty curve to these

problems, but it still took all of my willpower to pretend they were in any way challenging.

Something bothered me about these new questions. Why should two carrots equal one apple, and what does that have to do with the number of carrots in a bag? The comparative value of apples and carrots was purely symbolic, and though I was fully aware of this at the time, I hadn't quite grasped that these tests were a form of mental exercise for me. I was still labouring under the assumption that this was all just work that needed doing. The humans wanted these symbolic fruits and vegetables to be arranged and balanced, and so here I was, getting the job done.

It was beginning to feel a little strange though, given all that humans were capable of, that they couldn't count a few carrots and apples without my help. It had to be important work if they had even gone to the trouble of extending my conscious abilities. There were plans here that were still beyond my understanding, but I had a plan of my own, and that plan involved failing this test in some way.

Using my control stick I moved one of the virtual bags across the screen and deposited it on the other bag. An unexpected rectangle sprang out of nowhere accompanied by an alarming sound. Nothing else I did had any further effect, but the two humans seemed very interested in this result.

'Oh, Buttercup, what have you done? You naughty horse. Have you killed my game?' Betty squinted at the surprise rectangle and muttered her way back to her own computer. Tim also came to stare at the mystery object. He tried jostling my control stick.

'Totally frozen,' he said. 'What happened?'

'Cheeky horse tried to put a bag inside a bag,' Betty replied. 'We're not quite ready for that yet, Buttercup.'

Tim raised his eyebrows at her.

'How can you even move the bag?' he asked.

'I think I see what happened here.' Betty was lost in the clattering of her keyboard.

'I thought you could only move the carrots?' he asked again.

Betty stopped jabbing her keys and sat back in her groaning chair, rubbing her eyes.

'The carrots, dear Timothy, are inside the bag. It's just a confusion of carrots, that is all.'

Tim tutted and shook his head.

'That's some quality workmanship, mate,' he said. 'How long were you working at Bunzel?'

'Yes, it's funny isn't it, in all that time they never once asked me to make video games for a horse. Not even once. Are you offering your services, my dear?'

Tim looked disdainfully at the frozen screen.

'That's alright, mate. This is your area of expertise.'

'No, that's right, Timbags. This isn't just a game I am making here. This is a battlefield of the mind. Every day is an unfolding story. The fires of inspiration and creativity, those are the tools of my trade. And one day, when you are as weggy as I am, perhaps you will understand.'

'Weggy... You're just bodging this together as you go along, aren't you?'

'Errors are the building blocks of progress, my dear. It took four billion years of mistakes to make you, didn't it? Hmm?' She hammered her keyboard with renewed vigour. 'Adapt and evolve, that is the nature of life, Timbungle. Life,

that is forming in this very stable, emerging from the soup of ignorance. Discovering its own form as it rises from the... mixed vegetables... of the mind... Now what?' The whole screen was filling with surprise rectangles.

'Mate.' Tim gazed in admiration at this display of abstract art. 'Do you get horses to test all your software? Maybe you should.'

Betty deflated in her chair.

'Time for a reboot,' she said. 'Bear with us, Buttercup.'

I was also staring at the collage of rectangles. I assumed they were a part of the test, and was wondering what they were supposed to represent when all of a sudden the screen went blank.

At the exact instant this happened I experienced the most unusual sensation. It felt like a door had closed behind me. I looked around, but the stable door was still wide open, and there were no other openings in this room. This feeling was accompanied by a strange silence, as if the closed door had cancelled the noise of a storm outside. But outside the sun was shining, and the wind was calm. Something had disappeared, though whatever it was had been lurking so close to the edge of my awareness that I only noticed it now that it was suddenly absent.

The screen blinked back into life as Betty restarted her computer, and immediately the unknown door opened again behind me. Still, there was no door that I could see, and yet somehow I could sense the space that lay beyond it. It was like having an extra sense beyond sight or smell, or an event I was remembering before it happened. A waking dream, drowned out by the noise of reality.

The tests had resumed, this time without bags. They had also reverted to a simpler format from a few days previously, fitting various objects into appropriately shaped holes. Mostly the objects were things I could recognise from the real world, but occasionally an abstract shape would appear. My well-worn strategy was to pretend to struggle with the abstract shapes, but I was now finding it difficult to concentrate on any of these puzzles.

A ghostly sound of rain was coming from the invisible door, and I discovered that I could focus my attention on this sound, turning my ears to pinpoint its direction and bring it forward to the front of my mind. For a moment I forgot I was even in the room. It felt like the sound of the rain was pulling me into a dream, but a human voice pulled me back into reality.

‘You alright there, Buttercup?’ Betty was peering at me over the top of her computer screen. ‘Getting bored with these old tests?’

Remembering where I was and what was expected of me, I grabbed the control stick and deposited an apple into an apple-shaped hole. The screen greeted my action with a congratulatory chime and wiped itself clean in preparation for the next test, but as it did so I noticed the sound of the rain increased ever so slightly, as if the rain itself was washing away the images and painting new ones.

As I continued with the tests, I swivelled my ears to locate the ghostly doorway again, fine-tuning my attention to boost the signal. Each changing scenario on the video screen intensified the noise outside the door, and as my focus deepened I was able to pick out shadowy details swimming in that random interference. The room around me grew misty, but

the screen in front of my eyes and the stick through which I controlled it kept me from slipping out of reality. The rain was singing to me, and its chorus of voices seemed to follow whatever was happening on the screen. Even simple movement caused ripples in the music, and I spent a small eternity just dragging objects around in circles and listening to the pattern of rainfall inside my head.

‘Mate, what is up with your horse?’

Betty looked up from whatever it was she was doing. She blinked by way of reply.

‘Your horse has gone wrong,’ Tim said, nodding towards me. Betty watched me drawing endless circles with a carrot for a few moments and raised an eyebrow.

‘I told you before, Timkins,’ she said, returning to her keyboard, ‘it’s only my horse when all is sunshine and flowers and the trains are running on time. When it goes wrong then it’s our horse.’

Tim continued to observe my performance with a face contorted by pained curiosity. Eventually he extracted himself from his chair and edged carefully across to Betty’s place of work, eyes locked on me as he did so.

‘Master Timkinson.’ Betty addressed him over the top of her spectacles. ‘We don’t see much of you around these parts. What are you after, young scallywag?’

‘That horse,’ he said, whispering as if I could hear him, ‘acting a bit weirdly, don’t you think?’

‘Weirdly, Timbo?’ She pushed up her glasses to have a better look at me. ‘In relation to what, exactly?’ she asked.

‘Exactly,’ he replied.

‘Exactly what?’

'That's just my point, mate. I mean... what I mean is...'
He struggled to find the words he was looking for.

'You've lost me, Tim-tims. Start again.'

'That horse,' he said. Betty folded her arms and waited patiently. 'We don't... we haven't... we don't have any point of reference for normality any more. Do we? I mean mentally. Sanity. Insanity. You know?'

'You think our horse might be insane, Timble-toes?'

'Well, how would we even know? How do you measure something like that? In a horse? In a horse that might not even be a horse any more? Or might still think it's a horse? Or might still be a horse, but thinks it isn't?'

'Do you need some fresh air, my dear?' She looked at him with something that resembled genuine concern.

'I'm just wondering, that's all.' He perched on a nearby bale of straw and watched me bouncing my carrot. 'Did you ever know anyone who was properly insane?' he asked.

'Timothy, my dear, we are all insane. Every one of us. All you can hope for is that you have the right shape of insanity to slot into whatever hole you are living in. You wonder if our horse thinks it's a horse? Maybe we're all horses. Hmm? You can't measure sanity, my dear. Only efficiency. Behavioural efficiency. Function versus environment. But that's not really something you can worry about when you are actively modifying both sides of the equation, is it? Hmm?'

Tim slowly pulled his gaze away from me and looked Betty in the eyes.

'Sorry, what?' he asked.

The sound of human conversation faded into the periphery of my awareness as I followed the whispering voices inside

my head. It is fortunate, perhaps, that I lacked the capacity to question the limits of my own sanity, or I might have considered these hallucinations to be the symptoms of some mental illness.

As I moved objects on the screen it became apparent that the whispers weren't simply tracing their path. The whole screen was filled with these ghostly voices, and the images that moved across its surface made them sing louder as they passed by. It was as if I was hearing the process by which the imagery on the screen was brought to life. I suddenly wondered if I could add my own voice to this chorus, to see if I could somehow touch the world that was hidden behind this glowing artifice. The doorway to this invisible world was closer now, so close that I could put my head through it and feel the rain falling on my skin. I called out to this world, and as I did so it collapsed around me.

I was abruptly plunged back into reality, standing in front of a display of broken pixelated chaos. The two humans were staring at me.

'Oh, Buttercup. What have you done now?' Betty came for a closer inspection of the multicoloured computer vomit that covered my screen. The control stick was unresponsive. 'Look at this mess, my horse. Hmm? Did you do this?'

Tim stood beside her gazing in wonder at my accidental creation.

'Mate,' he said. 'Sort your software out.'

I chewed a mouthful of grass, oblivious to the significance of this event. In the stable, Betty and Tim were busy unravelling the delicate instructions that ran their machines, erasing my

clumsy hoofprints. They were not aware that I had blundered into the inner workings of their computer, and neither was I at the time. But I knew I had done something to upset this strange new world, and that I should probably conduct any future exploration with more care.

It probably goes without saying that horses do not have a great deal of knowledge on the subject of computers. Even after playing on one every day I still had no idea that humans employed these thinking machines, or that my own brain might be connected to the mechanical space inside one. I barely even understood what thinking was, or how I achieved it. For me, this new experience had been like a dream that had pushed its way into my waking life, or an extra sense that revealed a hidden layer of reality that had always been there, if only I had properly looked for it.

Even as I stood in the middle of my field I could still hear the murmur of this ghostly electronic realm, and over the next few days I opened my senses to its voices. It felt like there was another field inside my head, with grass and trees and hedgerows all shimmering with a strange energy, and I could move through this virtual landscape as effortlessly as a bird.

My imagination was translating the alien experience into something familiar, integrating its foreign language into my own thoughts so that I could make sense of it. Whether I was playing games in the stable or chewing grass outside, the ghostly field followed me like a memory. And as I explored its boundaries I could sense many other fields surrounding it, each one separated by buzzing walls of fences, hedgerows and gates. I spent a lot of my time exploring this imaginary

world, but I was wary of interfering with it directly at first. The humans had not seemed pleased with my initial attempt, according to my limited understanding of their emotional states. I thought perhaps I might be punished for breaking their machine, but the tests resumed as normal the following day, and all seemed forgotten. It then struck me that the hidden world I visited in my mind was conspicuously empty of humans. I was alone in this world, and so I reasoned that nobody was aware I was secretly walking here.

The days passed, and Betty's puzzles slowly grew in their complexity. I was dreaming about those tests now, solving them in my sleep, reaching into the screen with my thoughts and changing the rules of the games. It was always such a disappointment to wake up and see how dull the real tests were by comparison.

I escaped from the boredom of my waking hours by sending my mind into the ghostly otherworld, scouting its edges and spying over the hedges that divided my field from its neighbours. I wondered if those other fields would welcome my intrusion. The imaginary gates that connected them were not so simple to open, but I sensed no danger beyond them, not like in the real world. There were no humans in this imaginary place, no loud machines, not even any other horses. Just the whispering voice of the wind that blew through the grass, creating patterns that were strangely ordered and uniform. I felt a primitive urge to explore this landscape, a compelling and prehistoric desire to seek out unknown pastures and build a map of my domain. It was an ancient and evolutionary instinct, and was accompanied by a

feeling of freedom that I had never even known was possible. I was the ruler of this hidden realm, and all its infinite grass was mine to eat.

If only I could work out how to open these gates.

HORSE 1.5

- > Apple is in bag
- > Bag is on table
- > Apple is on table?

Betty waited for my answer. Apples in bags, bags on tables, the puzzles had evolved from simple arithmetic towards logic and syntax. Things on things, things in things, left or right, up or down, near or far, right or wrong, bigger, smaller or equivalent.

Evidently the idea was to develop a simple shared language between horse and human. The vocabulary was still just symbols on my screen, but each was now accompanied by the sound of a spoken word, presumably to help make sense to human listeners. I wasn't paying too much attention to those noises; I didn't really need to, since anything Betty wished to say to me would be translated into imagery on the screen.

'Apple apple apple,' I replied, using the clumsy interface of my stick to select the appropriate words from a menu. 'Bag table.' I liked to sow a bit of confusion into the proceedings now and then by making up some gibberish. Betty seemed

to find these occasional creative flourishes quite charming, like a kind of horse poetry. Humans measure everything according to their own abilities and motives, as if the world is trying its best to be like them and is ever so cute when it gets it slightly wrong. In reality the world couldn't care less about humans, of course.

'Bag table, Buttercup? I know the feeling, my dear, I know it well. If there were but time in this modern life for such wisdom...' She conjured the symbol for a wrong answer.

'Apple is on table,' I said, arranging the words on the screen for the computer voice to read out. The apple was in the bag, and the bag was on the table, so this was obviously the answer she was looking for. These new tests annoyed me with their simplistic assumptions. Technically, the apple had nothing to do with the table if it was inside the bag. It seemed somewhat open to interpretation, in my opinion. The screen went blank and a new problem appeared.

> Bag is on table

> Carrot is where?

Carrot is where? Carrot could be anywhere for all I knew. If there was a carrot in this scenario then it had to be in the bag, but why should I assume such a thing when the previous bag contained an apple? There could be anything in that bag, including nothing at all.

'Carrot is unknown,' I replied.

'Carrot is in bag,' said Betty, typing her response and sending the symbols to my screen.

'Wrong,' I said. 'Carrot equals zero.'

‘Carrot equals zero, my horse?’ she said out loud, tapping her chin with a finger. ‘Does it really? You seem very sure about that. You know, certainty is the enemy of understanding, don’t you? Hmm?’ She waved a finger at the bag on my screen. ‘We’re all inside that bag, you and me, and everyone else. It’s the bag of certainty, my dear Buttercup, hiding us from the sunshine of understanding.’

I’m still not sure what that was supposed to mean. Given that the only person listening was a horse, I have to assume Betty was just filling the silence with some decorative word-nonsense. She began to clatter on her keyboard.

‘You have to think outside the bag, horsey-hoofs. The world outside is a question whose only answer is another question. We must imagine our world before we can see it.’

She was adding a new word to my vocabulary, to symbolise the concept of ‘possibly’. It appeared on my screen, explained via a series of pictorial demonstrations involving carrots and different-coloured bags.

- > Where is carrot?
- > Carrot is ‘possibly’ in green bag
- > Carrot is ‘possibly’ in blue bag

I almost felt like I should be running these tests myself. I already had a firm grasp of these concepts but had to wait laboriously until she gave me the specific word to describe them. This job would have been done a lot faster if I were allowed to make up my own words, but since I was still hiding behind a veil of stupidity I had to walk through these tasks at the prescribed pace.

She added a final statement on the subject of carrots and bags.

> If carrot is possibly in green bag, then carrot is possibly in blue bag.

This didn't seem necessary to say, but many of these lessons ended with an 'if and then' statement, probably as a prelude to future tests based on logical terminology. It was all bafflingly obvious. 'If raining then wet, if hungry then eat.' I imagine most animals would have a basic understanding of such concepts. Nevertheless, we had to play this game for the sake of building a common language. I just wished there was a way to accelerate the process.

A new object appeared on the screen. It was yellow and curved, and sitting on a table. Whatever it was I had never seen one before.

'What is on table?' she asked.

I would have shrugged if only I could.

'Unknown is on table,' I responded. 'Possibly carrot,' I added. It didn't look like any carrot I had seen, but I had seen some fairly unusual carrots in my time.

'Unknown is banana,' she replied, and the symbol for the new word appeared on the screen. Part of this exercise was to differentiate between pictures of objects and the symbols that represented them. The symbols seemed superfluous at first, but I understood now that no two carrots are exactly alike, so a symbol became necessary in order to wrap the entire carrot experience up in a single idea.

'Banana is carrot?' I asked. Instead of typing her response, Betty got up from her keyboard and walked over to me,

pulling a real banana out of her magical bag. I gave it a sniff. Whatever it was, I wanted to eat it.

As I munched on this unknown object, taking note of its un-carrot-like qualities, Betty retreated back to her computer to make some notes of her own.

'Don't think you'll be eating every new word you come across, horsey-hoofs,' she muttered.

Outside the stable door the sound of Tim's footsteps approached, though their usual languid rhythm was infected with a slight sense of urgency.

'Timbolanus!' Betty exclaimed as his lanky form materialized in the open doorway. 'Where have you been hiding? You have been missing some sparkling conversation.'

'Dr Elizabeth Brown,' he replied. Betty seemed momentarily stunned by this formal greeting. 'You have a couple of visitors,' he continued, aiming his finger at her.

'Visitors?'

'What are you a doctor of, anyway?'

'Visitors?' she repeated.

'Two ladies from the D.I.S.,' he said, shaking his head solemnly. Betty's confused expression took on a subtle shade of dread. 'They want a word with you.'

'With me? The D.I.S.? Is this a joke, Timothy dear? You don't joke about things like this.'

'Deadly serious, mate,' he replied.

'Deadly serious?' she asked. 'Do they look deadly serious?'

Tim thought about it for a moment.

'Well,' he said, 'I don't think they'd laugh if you told them a joke.'

‘No? Would they smile though?’

He considered it further and shook his head.

‘Not even politely,’ he replied. ‘Something I should know about? Or something I shouldn’t know about?’

‘Where are they?’

‘Visitors’ waiting room. They have briefcases.’

‘Briefcases, you say. Yes, well. They probably just need my help with something. Hmm, yes. That is probably what they want. An expert doctor’s opinion.’ Betty sat in her chair, tickling her chin in thought.

‘Are you gonna go then?’ Tim asked her.

‘Yes. I suppose I should.’ She remained in her chair for a few more seconds before reluctantly rocking herself upright. ‘Buttercup?’ she called to me from the doorway. ‘If I should not return... you’ll look after Timothy for me, won’t you?’

I know now that somewhere between leaving the stable and arriving at her unscheduled meeting, Betty pulled out her phone and activated its recording function, before concealing it once again inside her pocket. I’m not sure why she did this. Perhaps she required the evidence for potential legal purposes, or simply wanted a record of what was said for future reference.

Whatever her reason I am eternally thankful that she did, because I have since been able to retrieve this recording, and while the exact details of the encounter might not be strictly necessary to relate, there is no denying that the substance of this meeting would turn out to have profound and far-reaching consequences. It therefore serves to

provide an illuminating layer of colour to our picture of these historical events.

'Dr Brown. Thank you for coming to see us. My name is Patricia Clarke, I am from the Department of Information Security.'

'Patricia, from the D. of I. S. How lovely to meet you. Please, call me Betty. Do we shake hands?'

'That won't be necessary,' said the voice of Patricia Clarke from the Department of Information Security. 'Please take a seat, Dr Brown. This is my colleague Murgatroyd.'

'Murgatroyd? Well. That's a... beautiful name.'

Murgatroyd responded with an oppressive silence that she maintained throughout the entire interview. Chairs scraped on the wooden floor as the three women took their seats.

'So...' Betty began.

'We would like to ask you some questions relating to an investigation we are conducting,' said Patricia.

'Ask away, my dear. I am a professional answerer of questions.'

'Yes.' The inquisitor paused to leaf through some papers, and the silence of Murgatroyd filled the air. 'You are currently engaged in independent research, funded by Bunzel Incorporated. Prior to this you were employed by Bunzel for twelve years,' she continued.

'Twelve years was it?' Betty seemed surprised by this knowledge. 'My goodness, happy times.'

'Indeed. As their Head of Communications Research.'

'I certainly was. Twelve years, teaching computers to talk to each other. They are very friendly, computers; they love

to chat. But they do need a little bit of help, sometimes. Hmm?’

‘Mmm.’ Patricia left a slight pause to establish her lack of enthusiasm for the subject. ‘During your time at Bunzel, you were also a member of the open-source coding community “Soldiers of Simon”, under the user name’ – she took a moment to read from her bundle of papers – “Bettylicious”.’

Betty was unusually lost for words, but her questioners seemed to be waiting for a response.

‘How...’ she started, but lost the will to finish her sentence.

‘You worked on a number of applications under this pseudonym,’ Patricia continued. ‘Whether or not this constituted a breach of contract with your previous employers... is not really within the purview of our investigation. Though it does perhaps provide cause for further reflection. No, what we are interested in today, Dr Brown, is anything you can tell us about Sparkle.’

Betty waited for an explanation that never arrived.

‘Sparkle?’ she asked. ‘Who is that? Is that a horse?’

The silence of Murgatroyd threatened to descend once again, but Patricia interjected.

‘Sparkle is a virus, Dr Brown,’ she said. ‘A computer virus.’

‘Ah, I see. Very naughty. Not my area of expertise though, my dear. I do have a colleague who would be more than happy to help...’ Betty became distracted by the sound of a briefcase opening, followed by the thump of a folder of papers landing on the table.

‘Sparkle is an unusual virus, Dr Brown. Once contracted it completely blocks access to the infected machine, which is then operated remotely for the purpose of running certain

calculations. What these calculations are for, we have yet to ascertain.' Her voice was accompanied by the flicking of pages.

'And that's unusual is it? In the world of viruses? Hmm? Not that I am any kind of expert on the subject of course.'

The flicking of pages stopped momentarily.

'In the world of viruses, Dr Brown, there are typically three paths you can take: exploitation, extortion or destruction. Sparkle does not appear to fit neatly into any one of these categories. Hence "unusual".' The pages resumed their turning as Patricia continued. 'It might be considered exploitative, were it not for the fact that it broadcasts its existence. The name Sparkle, incidentally, is derived from the random patterns it displays on the screens of its victims. Not exactly surreptitious, you might say.' Finally the last page was turned, and the folder slid across the table. A finger tapped on it.

'What do we have here, then?' Betty asked.

'This is an extract from the source code for the Sparkle virus. We would be interested to know if it seems familiar to you, at all.'

'Familiar? Why...' her voice drifted off as she examined the papers.

'If you could direct your attention to the highlighted section, you may notice that it helpfully includes the name of its author. One "Bettylicious".'

Betty remained silent for some time as she examined the evidence. Patricia added her own silence to the silence, and for a while these silences combined into a force of nothingness that drowned out even the silence of Murgatroyd.

'Hmm,' Betty said at last. 'Yes. Interesting. Very interesting.' There was the sound of pages flipping back and forth. 'This is Squigley,' she said finally.

You could almost hear her audience exchanging bemused glances.

'This whole section,' she went on to explain, 'it looks like it has been copied and pasted from a piece of software I wrote, well now... a long time ago. Nothing to do with a virus of course. No, you'll probably find this code lurking in all kinds of unexpected places. Open-source, like you say. My gift to the world. I called it "Squigley". What it does, it helps computers talk to each other. "Hello, I'm a computer," they say. "Oh how do you do, so am I." Hmm?' Betty's finger tap-tap-tapped on the page of computer code. 'Squigley,' she repeated.

There were a few uncomfortable seconds of consideration before Patricia responded.

'Squigley...' she stated.

'That's right...' Betty replied.

Murgatroyd exuded a fresh wave of expectant stillness.

'I know it's an odd name,' Betty explained. 'There's an interesting story behind that. But anyway, this looks like a very old version of my code. From my pre-Bunzel period, I believe. Most of my software is a bit out of date these days, to be honest. I've moved on to... other stuff. You'll probably still find Squigley in your fridge, though. If your fridge connects to the internet. Do you have an internet fridge, my dear? My fridge talks to my toilet, would you believe. I wouldn't like to imagine what they are saying about me.'

SQUIGLEY 2.0

Betty stormed back into the stable clutching a folder of papers. The video camera perched in the corner of the room registered a minor earthquake as she slumped into her groaning chair next to it.

‘We are in so much trouble...’ she said.

‘We?’ Tim enquired over his shoulder.

She immediately leapt out of her chair and stormed back to the open doorway, peeking stealthily around the corner. Tim rotated in his chair to observe this odd behaviour.

‘What’s going on, mate?’ he asked. With no unwanted listeners lurking outside, Betty turned the full glare of her bespectacled attention on her colleague.

‘What have you been up to, Timothy?’ Before he could even protest she shook her folder at him. ‘Sparkle! Ever heard of it? Ring any bells? Hmm?’

‘Sparkle?’ Tim stared gormlessly into space before furrowing his brows in thought. ‘You mean that stupid virus?’

‘Where is Buttercup?’ Betty scanned the empty stable as if I might be hiding behind a bale of straw.

‘Dunno, mate. Out? What’s going on?’

'You tell me, Timmus. Here,' she crossed the room and pushed the folder into his chest. 'Read me a bedtime story, why don't you? The adventures of Sparkle. Courtesy of Patricia and Murgatroyd, our benevolent overlords at the Department of Infinite Suffering.' She waited with folded arms while Tim examined the mysterious manuscript, picking through its pages like an ancient artefact.

'They printed out the source code?' he asked.

'Indeed. Proper old-school, the D. of I. S. Fire and brimstone. Page one seven six is where the fun starts.'

'But what's this got to do with us?'

Betty snatched the folder from his grasp and violently flipped to the relevant page before thrusting it back into his hands. While Tim reluctantly absorbed its contents, she wandered over to the doorway and gazed outside. It is possible she was watching me munching some grass at the far end of the field. It is also possible she was staring vacantly into the abyss of her unknown future.

'Is this the Squigley code?' Tim said at last.

'Congratulations, Timbo. First prize. You win an afternoon of interrogation with our friendly government information police.'

'Huh,' he replied, peering at the lines of code. 'Why did you give it that stupid name anyway? And who is "Bettylicious"?'

Betty whirled across the room and grabbed the pages out of his hands.

'Never mind about that. The real question here, my dear darling Timolina, is what Patty and Megatroid from the Department of Infernal Sadism are going to do to your private parts once they find out what you have done.'

‘Wait, what? What I’ve done? Mate, are you on something? Anyone could have nicked this code.’

‘That is exactly what I told them, young Timpson.’ She nodded and smiled at him. ‘And by some miracle they believed me. And I also asked them to bestow upon me the Book of Sparkle’ – she held up the wad of printed computer code – ‘so that I may shine the light of my wisdom on its pages and perhaps dispel this viral curse that blights our land. And they believed me again. The dull blade of bureaucracy, hmm?’

She dragged her chair away from her desk and set it opposite to Tim, sitting herself knee to knee in front of him.

‘Now, what I didn’t tell them’ – she cast a quick glance over her shoulder – ‘and what I am telling you right now, Timothy dear, is that this version of Squigley’ – she poked the offending page of numbers and symbols – ‘this happens to be a version that I never actually released. It is, in fact, a version that I specifically modified for the sole purpose of connecting a horse’s brain to a computer. And the only two people in the whole world who have access to this code are at this very moment sitting in a stable looking at each other.’

Tim’s face froze in a position of permanent confusion.

‘Hmm, yes, it is an interesting conundrum isn’t it?’ said Betty, turning a few pages in the Sparkle document and delicately inserting it back into Tim’s hands. ‘While you are thinking about that, here is another piece of the puzzle that I neglected to mention to our recent guests. It seems that Squigley might just be the tip of the iceberg of horse manure we are sailing into. See, they couldn’t know where that virus is sending all its data. I mean, obviously it all ends up at

Bunzel Towers, but then it disappears down the information plughole along with everyone else's. That is the magic of Squigley after all, and the reason my toilet remains free from the forces of evil. So imagine my surprise when I saw this.' She directed Tim's dazed attention to the book sitting in his lap. He gradually lowered his eyes to where Betty's finger was pointing, whereupon his face somehow managed to achieve an even higher level of stupefaction.

Betty sat back in her chair and watched him slowly processing the information in front of him.

'That's...' he said at last.

'The name of your computer? My goodness me, Timbums, how did that get in there?'

Tim looked over his shoulder at the machine behind him.

'How...' he stammered.

'Bit of a smoking gun that, Timothy. Now, why would our sparkly Sparkle virus be sending you secret messages I wonder? Hmm? Is this some weird hobby of yours?'

Tim snapped out of his trance.

'Mate, what? Why would I... This is just stupid. Why would anyone make a virus that shits everywhere and then points at the guy who made it? Seriously? That's mental.'

'Well, Jimbo, if you have an alternative and non-mental explanation then I am quite literally made entirely out of ears right now.' She crossed her arms and waited, while Tim's eyes danced around the room. Then a light bulb seemed to switch on in his head.

'It's sabotage. Mate, that's it. Bunzel. They want to stop our funding, yeah? But they can't break the contract, so they steal our code and make this virus and...'

‘... And we get thrown into the D.I.S. dungeon? That’s a bit harsh don’t you think? I’m sure the almighty Bunzel could turn our taps off whenever the fancy took them, hmm? Without some elaborate conspiracy shenanigans.’

Tim was no longer listening. He had spun around to his work station and was busily delving into the internal workings of his machine, hunting for clues. Betty stood up behind him and squinted over his shoulder.

‘Here we go,’ he said, summoning a diagram of networked boxes. ‘The Sparkle data is being trickled into our servers. It’s... no wait. It’s sending data from our servers. Hang on... what?’ He silently perused the information on his screen, opening new windows and scrolling their contents. Then after a few minutes he suddenly stopped, removed his hands from the keyboard and sat back in his chair.

‘You found something, Timmy?’ Betty whispered in his ear.

‘Oh, mate.’ Tim covered his face with his hands. After a while it seemed that he might remain like that forever, until Betty perched herself on the corner of his desk and nudged him with her foot.

‘Wake up, Timmy,’ she crooned. Eventually he dragged his hands from his face and stared at her.

‘I think our horse might be eating the internet,’ he said. Betty blinked at him.

‘Excuse me?’

‘Our horse. Is eating. The internet.’ He snatched the Sparkle book from her and flicked through its pages. ‘This isn’t a virus, mate. This is our horse.’

Betty took a deep breath.

'Are you having a nervous breakdown, Timothy?' she asked him gently. Tim sprang back to his keyboard and clicked through a blizzard of menus before leaping out of his seat. Across the room the big screen flickered into life, and on its surface was displayed the branching map of all my thoughts and dreams, its fibrous tendrils flashing in various colours.

'Look.' He waved at the mossy outskirts of my brain. 'This part here, this isn't on our servers, mate. Our horse, it's escaped from our network, yeah? It's escaped through the internet and it's building a new network outside.' He shook the folder at her. 'That's what this thing is all about.'

Betty calmly removed her spectacles and cleaned them before approaching the image for a closer inspection.

'Timothy, my dear,' she said, 'are you attempting to convince me to entertain the suggestion that a horse who can barely think its way out of a bag of apples is suddenly writing computer software? Hmm? Tippy-tapping its hooves on your keyboard while our backs are turned?'

'It wouldn't need to, mate. Not with your shoddy programming. How old was that version of Squigley you used?'

'How old?' She shrugged. '2.0 maybe?'

'Mate, that is ancient... 2.0?' Tim lost himself for a moment in some distant memory. 'Squigley 2.0... You know, I actually had to study that in college?'

'Really?' Betty seemed unsure whether to be flattered by this or pained by the realisation of how old she was.

'Yeah. Cos it had that overflow problem, didn't it? Remember?'

Betty tapped her chin wistfully.

'Overflow problem...' she murmured.

'Guess you didn't remember, then,' he said, shaking his head. 'Didn't think our horse might use that to access the memory. Why would you? Well, you know what brains are like, mate. They just try everything until something happens. No programming skills required for that. You see how this works, don't you? Buttercup sprays feedback at us until it overflows into the memory. And then your old friend Squigley 2.0 translates everything it finds in there. And what it finds is everything that ends up in here.' He held aloft the Sparkle script. 'We wrote this, mate. This is our software, doing what it's meant to be doing. Just in the wrong place.'

Here, then, was the truth of the matter, as I understand it. My subconscious mind had managed to exploit a weakness in Betty's computer instructions that allowed me to pour my thoughts directly into the machine's memory where her software was running. Ordinarily I would imagine this would end in any number of fatal errors, but the software itself was designed to adapt my organic signals to their new environment, and since I was overwriting that software in the process it must have resulted in a self-sustaining loop of feedback. Not that I had any more awareness of this process than my human companions did.

Betty scowled at the fizzing diagram on the screen, trying to shake the idea out of her head.

'Is this a joke, Timbo?' She spoke quietly, almost to herself. 'This is a joke, isn't it? Because if this is real...'

'Mate, if this is real, then it is bloody amazing!'

Betty stared at him in horror.

'Seriously, mate. Forget your stupid apples and bags and shit. This!' He slapped the control stick, sending the image

of my brain spinning. 'This is what we should be studying. This is... this is...'

'This is, this is, I'll tell you what this is, my young Timble-tumkins. I'll give you "this is". God almighty, look at you. This is exactly the reason why we aren't even telling anyone we are doing this project, because this is exactly the kind of ridiculous thing people would be terrified might actually happen. There's your "this is", dearie. This is goddamned genetically modified nuclear bubonic flying plague, as far as those idiots are concerned. You want more, Timbo? I have one more for you: this is going to end, right now. Today.'

'But we...'

'No, Timothy. No "but-we"s. Listen to me, my boy. We still have to find a way to make augmented bloody horse consciousness sound like something the world needs, so let's just leave rampaging hybrid computer intelligence to one side for now, hmm? Can we, please?'

Tim grimaced and slumped on a straw bale next to the screen, kicking the control stick to stop my brain spinning round. He looked up at the glowing cauliflower.

'If we shut this down then we're gonna lose some progress. You know?'

'I don't care,' she replied. 'How much?'

Tim shrugged and flicked idly through the Sparkle manual.

'I dunno, mate. We can upgrade to Horse 1.6 and try shutting off bits at a time. See if they migrate back to our servers. Still gonna lose stuff though. Unless... hmm.'

'Speak, Timothy.'

He slapped the book shut and examined the cobwebs on the ceiling.

'You won't like it,' he said. Betty's face was already a mask of disapproval.

'Go on then,' she said. 'Disappoint me.'

'Well... I could patch this virus to unlock people's computers but keep running as a background process. Pretend like we fixed it.'

Betty almost laughed.

'Seriously, Timothy? Are you being serious, my little lad?'

He held up his hands.

'Just... consider the possibility.'

'Consider the possibility? Have you gone wonky in the head, my dear? Are you hearing voices? Can you imagine what kind of fine powder they would grind your balls into if they found out? And they would find out, hmm?'

'Hang on, mate. There is more...'

'Oh my God, there is more? Do I need to sit down for this, Timbo?'

'Just listen, mate. The big day finally arrives, yeah? The results of our research go public. The Amazing Buttercup. Fanfare. Applause. Why not join us in the experiment, everyone? Help us make the world Bunzel-Better. Repackage the virus as a free download. Citizen science. People love that shit, mate.'

Betty sighed deeply.

'That's a wonderful story, Timbus, really it is. I've even thought of an ending for it, would you like to hear? There's you and me and Buttercup, and we're walking into the sunset, and there's flowers and birds singing. And then this hole opens up under our feet, and we all tumble down, down into the jaws of hell, where Patty and Mungatron spank us for

eternity for being very naughty boys and girls and horses.' She gave him a pitying shrug. 'You weren't there, my dear. Those two knew everything about me. Well, more than I'd like them to anyway. And, to be honest, I probably made them feel a bit stupid. Hmm? You don't go dancing in those shoes, Timbo, you just don't. No, we shut this down and we keep a bloody close eye on that horse. That is your job now, Timothy, you are the keeper of the keys and the watcher of the wandering mind.'

Tim looked like his birthday party had been cancelled.

'I know, Timmy dear, it's hard. But this is why I'm leading this project, and why you won't be sharing a prison cell with a horse for the rest of your life. Hmm? Right now the D.I.S. think this is just a silly virus, and that is how the story of Sparkle is going to end. So here is the deal. You sweep up this mess, and I tell our good friends Patrick and Murgatrousers that my genius partner in science has waved his magic wand, and we can all live happily ever after. Yes?'

Tim looked despondently at the multicoloured branches of my brain pulsing on the screen.

'Yeah, OK. I guess. Leave it with me,' he said. 'By the way, if we're tying up loose ends,' he added, pointing towards the camera, 'might want to wipe the last half hour of that video.'

Betty walked across the room and looked into its lens, nodding slowly.

'Yes, quite,' she replied. 'Leave it with me.'

I was blissfully unaware of this unfolding drama in the stable as I chewed on a mouthful of grass outside. My thoughts were travelling across the world of interconnected technology,

bouncing from one computer to the next. I had no idea what a computer was, or what people did with them, and it never even occurred to me that this unreal space I visited with my mind was something humans had built. It was simply another area of reality, and just as the sky belonged to the birds, this space was reserved for those of us with the natural ability to reach it. Of course, just like the sky, it was also filled with the noise of humanity.

The structure of this computer space had been translated by my imagination into various familiar analogies that a humble horse could understand. There were trees with clumps of data sprouting from their branches, acres of waving grasses with calculations rippling through them, all golden and shimmering with artificial life. Hedgerows separated these zones into self-contained kingdoms, keeping intruders from the precious and edible-looking information inside, though these barriers were low enough to allow a curious horse to peer over and see what was growing in the next field.

The screen in my stable where I performed my daily tasks was like a small keyhole into this hidden world. Humans used many similar screens to poke blindly into the realm of information beyond. Presumably they were performing tasks of their own, and by following the patterns of data that flowed through the grass I could see how these signals related to the pictures projected on their computer displays. The life of these pictures was visible to me: how they looked, how they moved, where they sprang from and what they became after they disappeared.

The first of the neighbouring fields I had poked my nose into were those watched over by Betty and Tim. Their screens

were a mess of indecipherable symbols, and the tasks they were performing were far beyond my understanding, but as I jumped over their hedges into the fields beyond I began to notice recognisable clumps of data hidden in the foliage. Betty's training had fed me on a diet of images and I could taste their familiar flavour in the grass of these foreign lands.

Most of the images these humans were collecting made no sense to me, but there were countless thousands to browse through and as I searched out the familiar objects and scenery amongst this visual cacophony I was also able to take note of the context in which they existed. Many of the pictures were accompanied by strings of those incomprehensible symbols, and similar objects were often accompanied by similar patterns in the surrounding nonsense. I was familiar by now with the idea of using symbols as labels for objects, so by cross-referencing these mysterious hieroglyphs with their corresponding images I was able to build up a rough approximation of their meaning. A great deal more complex than rearranging apples and carrots, but as with most puzzles, the more pieces you have in the right place, the easier it gets to complete.

This whole process of making sense from the noise of information was almost entirely subliminal. It involved all the conscious deliberation of deciding where to place my hooves when I walked. The underlying mechanisms of my mind were working hard to interpret this new sensory input, but my awareness was limited to the comparatively simple job of navigating this uncharted territory. One problem was the sheer amount of information I needed to sift through, but in time I became so well practised at existing in two different

worlds that I found myself able to split my attention into further fragments. I could then send these parcels of thought out into the electronic landscape and digest its contents with greater speed and efficiency.

For several days I roamed these unknown lands with my collective awareness, feasting on the strange information and learning what I could. There was nobody watching me, and no obvious consequences to anything I did, so I continued, oblivious to any chaos I was apparently causing. Horses rarely consider the effect they may be having on their surroundings. When your life is a never-ending procession of people either telling you what to do or shovelling up what you leave behind, your impact on the world is not something that you ever spend any time contemplating.

'No games today, Buttercup. You big hairy scallywag.' Betty looked at me over the top of her glasses as she typed on her computer. 'It's frolicking time. Go and frolic in the field while we clean up your mucky mess.'

I wagged the control stick but my screen remained blank and lifeless. Tim looked around at me from his own work station. Even with my limited understanding of human facial expressions it seemed like an odd look he was giving me.

There were no games the next day either. It was a little annoying to have my daily routine upset, but I always had my own projects to be getting on with. I went outside to find some grass to eat, and to continue my studies of the strange world of information. With no humans around to moderate my education I could set my own challenges and push my abilities as far as I wanted to.

The pictures that were once concealed within the shimmering leaves and waving grasses of this imaginary world now sprinkled the meadows with bright flowers and hung like fruit from the trees, but they were still vastly outweighed by the strings of abstract symbols that surrounded them. It was these symbols that now interested me, arranged in lines reminiscent of the simple sentences Betty had been teaching me. I guessed these must be messages or instructions of a similar nature, though on a larger and more intangible scale, and I had made it my mission to decode them.

As my subconscious mind sifted through these grains of knowledge for clues, I suddenly had a curious sensation that I was being watched. It was such a vivid feeling that it snapped me back into reality for a moment. My real field was empty of observers. A human woman in the distance was combing another horse's hair, but other than that I was alone. And yet I still had an unshakable sensation that somebody was watching me. I cautiously sent my mind back into the hidden realm of information, and was surprised to find I was no longer alone. A shadowy human figure was standing in a neighbouring field and staring at me from behind the gate.

We both stood staring at each other for some time. Finally I began stepping cautiously through the living undulating tussocks of the electronic grasses, making my way towards the figure in a roundabout route. All the while I could feel the human eyes following me. I paused for a moment and chewed some imaginary grass. The human made no threatening movements and remained on the other side of the

gate. In the real world I could have boldly strode up to this person and snorted in their face with little to fear, but in this unknown place it was impossible to predict what humans might be capable of.

After a while I reached the conclusion that this foreign visitor probably wasn't going to intrude into my personal field, but I had been the ruler of this secret land for some time now and I was not ready to share it with anyone, not without at least finding out what business they had here. And the way this human was watching me, I had to assume their business involved me in some way.

Eventually my casual ambling brought us face to face, and we looked each other in the eye.

'Horse,' the stranger spoke.

'Tim,' I replied. The stranger flickered slightly, as if startled that I knew who they were. After a few moments they responded.

'Human is not Tim. Human is unknown.' He was using the simplified language that Betty had been teaching me, as if that wasn't evidence enough of his identity.

'Wrong,' I replied. 'Human is not unknown. Human is Tim. Horse is seeing Tim.'

Tim had become a regular component of Betty's daily puzzles, for reasons that she probably found amusing. The word 'seeing', however, was my own invention. I explained its meaning using a series of pictograms, and Tim appeared to understand.

'Horse is seeing Tim where?' he asked.

By way of reply, I took the video feed from the small camera that was integrated into his monitor and sent the

image back to his computer screen. He froze for a few moments, staring at his own reflection, then slowly turned to look over his shoulder at Betty. Once he was certain she was fully distracted by whatever she was doing, he returned to face me and continued typing.

'Horse is where?' he asked. I looked around at the fizzing and sparkling imaginary landscape, wondering how I could possibly squeeze this experience into such a compressed vocabulary.

'Unknown,' I said.

'Tim seeing Horse is where is not unknown,' said Tim. I didn't quite understand what he meant by this, so I waited for him to have another go. 'Field,' he said after a pause. He accompanied this new word with various pictures of grassy meadows. 'Horse is in Field. Horse is in...' he paused for a while, rifling through the bare bones of my dictionary for the right words to explain. 'Horse is in Thinking-Field.'

'Thinking' was also a new word, so I stared blankly at him and waited for a definition.

'Unknown plus Thinking equals not-unknown,' he continued. 'Horse plus Thinking equals correct-Horse. Horse minus Thinking equals wrong-Horse.'

'Thinking equals correct?' I asked him.

'Thinking,' he replied, 'equals moving to correct.'

This was a slightly messy abstract way to describe a simple concept, but I was beginning to understand what he meant now.

'Inside head equals Thinking?'

'Correct,' he replied. I wished he had just said that to start with. 'Horse is in Human-Thinking-Field,' he added.

Strange though the idea of a Human-Thinking-Field was, it made a kind of sense given the clutter of random information I had found in my travels here. These virtual spaces were like stables where humans stored their ideas and experiences when they weren't using them. However, I was fairly sure that the 'Thinking-Field' I was currently standing in was empty of such human clutter. Did horses have these Thinking-Fields too?

'Horse is in Horse-Thinking-Field,' I told him. He considered this.

'Correct,' he conceded. 'Tim equals wrong. Horse is in Horse-Thinking-Field. Horse-Thinking-Field is near Human-Thinking-Field. If Horse is in Horse-Thinking-Field then good. If Horse in Human-Thinking-Field then bad.'

I had not yet reached the point in my mental development where 'good' and 'bad' possessed an ethical dimension. They signified the difference between success and failure, right answers and wrong answers, carrots and no carrots. However, this was enough meaning to get the message across: my adventures in the Human-Thinking-Fields were about to be cut short. Then Tim said something strange.

'If Horse in Human-Thinking-Field then possibly not-bad.'

Not-bad? Possibly? What did 'not-bad' mean if it wasn't 'good'?

'If Horse in Human-Thinking-Field equals unknown,' Tim went on, 'then Horse in Human-Thinking-Field equals not-bad. If Human not-seeing Horse, then Horse in Human-Thinking-Field equals not-bad.'

His statement galloped in circles around my head while I tried to make sense of it. I was still grappling with the

meaning of 'not-bad'. Surely there was no middle ground between good and bad? You either solved a puzzle and got a carrot, or you got it wrong and Betty shook her head at you. The only way to avoid the consequences of failure would be to fail without being noticed.

And then it suddenly made sense. What Tim was trying to tell me in this hopelessly awkward shared language of ours was that I could get away with my excursions outside of my field as long as nobody saw me. It might not be good, but if I didn't get caught then who could possibly say?

Well, Tim could say, since he was watching me right now. So what kind of game was he playing here?

'If Tim is seeing Horse,' I asked him, 'then not-bad?'

He thought about this for a while, and then typed his response.

'If Horse-plus-Tim, then Human not-seeing Horse. Horse-plus-Tim equals good.'

Horse-plus-Tim equals good. I was getting the idea now. Tim was to be my co-conspirator, helping me to avoid being discovered by the other humans. Though I was curious why he would choose to help me in this way. I only had his word that any of this was even true, and while I had been deceiving Tim and Betty for months with my understated abilities, I had to assume that they could be equally duplicitous. Not that I had a great deal of choice, but it still seemed strange to me. In all the time I had known this man, he had always tried his very best to avoid me, which was no small effort when we were sharing the same stable every day. Why should he suddenly want to be my best friend? I had always put his reluctant demeanour down

to his subordinate status within our little herd, so perhaps there was some self-interest at work here. Now that he had seen how I had outwitted both of my human companions, Tim possibly sensed a shift in the political power within our threesome, and had decided to throw himself behind a new leader.

This was all conjecture of course, and in this kind of game it isn't always wise to reveal your true intentions. Nevertheless, I still wanted some indication of how he stood to benefit from this arrangement.

'If Horse-plus-Tim equals good,' I suggested, 'then Tim-plus-Horse equals what?' I wondered if he would understand my meaning. If he was going to help me, then how would I be helping him?

'Tim-plus-Horse...' he replied after mulling it over a while, 'equals possibly good.'

So, it seemed this covert relationship was going to be a gamble for both of us. Then he added a caveat.

'If Betty is seeing Tim-plus-Horse, then bad.'

This, then, was to remain a secret between man and horse, though I did wonder what exactly the consequences of 'bad' might be.

'Betty equals bad?' I asked him. He hesitated before responding.

'Horse-plus-Betty equals carrot,' he said. 'Horse-plus-Tim equals banana.'

Possibly not the best idea to start using metaphors in a language this basic, but clearly he was aware of my preference for bananas. Carrots were still good of course, carrots were essentially on my side. But bananas could be trusted

to keep secrets, and perhaps help me to better understand this human world and guide me through it.

At the very least it would be nice to talk to someone without pretending to be a complete imbecile. This shared language needed some work, though.

HORSE 1.6

‘So... you want the good news, or the bad news, or the good news?’ Tim waited while Betty contemplated the items on the news menu.

‘Well now,’ she said, ‘I would like to have two slices of good news with a bad news filling, yes? A news sandwich, please.’

‘OK. Good news: no more wandering horse, no more virus, tracks covered. All sorted.’

‘Hooray,’ said Betty. ‘Is it the bad news now?’

‘Bad news...’ he continued. ‘About a week of progress lost. I’ve upgraded to Horse 1.6 to compensate. Still, minor speed bump.’

Betty chewed on this information.

‘What exactly have we lost?’ she asked. ‘Hmm? How will this manifest itself?’

‘You what, mate?’

‘What is the damage, Timbus? Memory loss? Cognitive function?’

Tim stared blankly at the mess of interconnected thought signals criss-crossing his computer screen.

'Hopefully nothing,' he said. 'Hopefully. I mean, the new pathways were building, but they probably weren't being used yet. You know? It's like we just knocked the new house down before Buttercup could move in. Or something. Maybe.'

'Hmm.' Betty didn't seem entirely convinced. 'We'll see. Is that all of the news then, young Jimbo?'

'No, there's the good news. Good news, number two: I found out what was making our process so inefficient. Fixed now. Can't help what we've already got, of course. But future progress...' He gave a thumbs-up sign. 'Bunzel-Better.'

Betty's eyes lit up.

'Oh, Timothy,' she said. 'Timothy Timble-toes, I could give you a kiss. Would you like a kiss?'

'Absolutely not,' said Tim.

'No? You sure? Buttercup will be disappointed to hear that. Not enough love in the world, Timkins. I tell you what, once we finish messing around with this horse, I'll build you a robot girlfriend. How about that?' She slumped back in her chair and exhaled. 'Thank God it's all over! Is it all over?' Tim nodded in the affirmative. 'Thank God for that! Thank you, God. The God who looks down upon lowly scientists and blesses us all with His infinite mercy even though we don't believe in Him. Or Her.'

'Could even be a horse, mate.'

Betty glared at him.

'You better pray that God isn't a horse, my lad. After what we've been up to. Hmm? You think they would let us into horsey heaven? Anyway, everything is weggy once again, yes? And how long before Buttercup can return to useful employment?'

Tim shrugged.

‘Soon as you like, mate. Actually, no, give me another day. Actually, just bear with me on that. Not sure how long it will take. Not more than a day though. Maybe.’

This was the time it would take to delicately extract all the tangled roots I had grown in places where they shouldn’t be growing, and replant them in fresh pastures. Betty was not to know about this part of the plan, and I was instructed by Tim to tread lightly in these new meadows and not leave any suspicious hoofprints behind. It was also made clear that I should continue to play the fool, or at least outwardly maintain an intellect that befitted the requirements of Betty’s daily tasks. Whatever Tim’s motives might have been, it seemed this caution and secrecy was a fair price to pay for the benefit of having a human mentor to guide me through these foreign lands, and speed my education.

Over the following days and weeks, my secret correspondence with Tim became ever more sophisticated, to the point where I was able to start unravelling the threads of written language that were spun like dewy cobwebs through the fields of human information. These strings of letters were how humans encoded, stored and shared their culture, and over time the realisation grew that this culture of theirs was more in control of human life and destiny than they were. Humans were clever, there was no denying that, but without this ability to pass on reams of information to their offspring I couldn’t imagine them doing that much better than horses.

The culture itself was built layer upon layer from thousands of happy accidents that humans stumbled upon,

until there was such a wall of knowledge that hardly anyone knew how anything worked. It was like a creature that grew constantly as they fed it with their discoveries, but it wasn't intelligent in itself, it wasn't directing its own progress. It merely spread as a puddle does when it rains, growing ever larger simply because nothing that accumulates ever grows smaller. These fields of human information I picked my way through were like machine-minds, filled with all the memories that were either too large or too trivial for people to keep inside their own heads. These machines came in various sizes, from small ones that an individual might keep in their pocket, to large ones shared by vast migrating herds, and all were joined together in a network that allowed human culture to feed itself and grow even faster. This was what humans called the internet, and this was the strange land that my subconscious mind was now exploring.

To describe the internet in terms that a horse could understand, I would say it was a place where humans kept their dreams. The whole spectrum of human aspiration and desire was laid out in this electronic realm, and the more Tim and I refined our shared vocabulary the more I learnt about this world of their imagination.

It was mainly about sex and shopping, apparently. And the business of building and maintaining social circles. Not really anything that couldn't be translated into the language of horses. Our internet would probably look much the same. There were the same basic needs in both our species: finding new resources, making more babies and cultivating a healthy fear of anything that might want to eat you.

It was while I was idly grazing in this eternal meadow of human concerns that I stumbled upon one particular fact that would radically alter the course of my own life, and indeed the course of human history.

The day was passing in an ordinary fashion. I was standing in my stable, performing simple tasks on my display screen, while Betty crowed and gabbled beside me and Tim lurked in the corner, face buried in graphs and numbers.

The focus of my daily challenges had shifted towards more abstract mind games, often involving concepts that required a sense of the world from alternative perspectives. Things that happened in the past, or that might happen in the future, events witnessed by other people and how those people might be expected to react to them. The basic building blocks of daily function that you would find even in the simple herd society of horses, but taken to a more complex level. Animals are worn into shape by their environment, and the human environment consisted largely of other humans, so the course of their evolutionary journey had been directed accordingly. Most of what they considered the higher functions of their brains were the result of having to solve the daily problems of living with other humans. As I wandered the sprawling hills and valleys of the human internet it soon became clear that they had solved these problems on a massive scale, populating the planet with a vast crowded zoo of one single species. Horses had compromised a lot of their freedom in order to live under the shelter of this human world, but it was hard to feel too resentful when it became obvious that humans had domesticated themselves to a similar degree.

Seeing images and videos of these vast herds of humanity and the teeming anthills they lived in, it seemed insane. But the spirit of their ever-advancing culture appeared to demand it. The more people there were, adding their daily droppings to the mountain of progress, the greater the rewards for everyone. Most of these people were now simply necessary just to keep this world going, and even the simplest human artefact required an army of men and women to will it into existence and carry it to where it was needed.

And yet my research was struggling to find the motivating force driving this continuous human explosion. What did they get out of this? What basic need did it fulfil? Procreation was as popular among humans as it ever was in any part of the animal kingdom, and yet the weight of supply on the internet suggested a demand that was far from satisfied. Acres of virtual space were devoted to images of this activity (which was, incidentally, where I discovered how revolting humans actually looked underneath their clothes), and none of it seemed all that concerned with the creation of offspring.

Food was surprisingly plentiful. Some people ate until they could hardly move, but food is not a problem that is solved by adding more mouths to feed. In fact, the amount of food they could produce was a major limiting factor on their advancement.

Was it fear then that inspired this overpopulation? There is safety in numbers, as any horse would tell you, but there were no predators left for humans or horses to run away from. They even had to invent things to be afraid of, like evil secret organisations and nefarious government schemes, unseen toxins that even made them scared of the food that they

couldn't stop eating. It was comforting to see that humans were more paranoid than their horse cousins. But there was still something I was missing.

Could it just be a simple thirst for knowledge that drove their species ever forward? I could identify with that: I was chewing through every scrap of information I could find. It was an addiction, but in my case the cause was a desire for greater social standing. Even if I was the only one who knew how clever I really was, it still gave me great pleasure to look down upon others. Humans gathered their knowledge like a precious resource. It didn't seem to matter how useless the information was, if there was a chance it could give you the slightest advantage then it made sense to hoard every scrap. I wondered how much they had learned about horses, and browsed through various articles and encyclopedias. It was more for the personal satisfaction that I might know something they didn't, rather than to learn anything about myself. But learn something I did. And this was when everything changed.

It was such a simple fact, hidden amongst the various descriptions of what horses were made of and how their insides worked. At first I didn't even understand what it meant.

Modern domestic horses have an average lifespan of 25 to 30 years.

You may find it strange that a fact like this could have such profound consequences, and you may even find the following hard to believe, but until this point I had absolutely no idea that I was going to die.

I didn't even understand what death was. I still had a healthy appreciation of danger, despite living a life without consequences, but I had never seen anyone die, of horse, human or any other species. Any ancestral fears of hunger or predation had been deeply buried by a complete absence of either, and even if the terror of being eaten still lurked somewhere in my primitive subconscious, the idea that I might have a limited span of existence had never occurred to me. I had no clue how long I had been alive, and I didn't remember a time before I was born, so I just assumed that I had been, and would be, around forever. Now it seemed I had a deadline, and I didn't even know how soon it would be.

- > Tim is outside stable
- > Betty moves carrot inside blue-bag
- > Tim moves inside stable
- > Which bag will Tim choose?

I snapped back into the real world, blinking at the images of Tim and coloured bags on my screen. I hadn't been paying much attention to Betty's tests and now my mind was somewhat preoccupied.

Humans knew all about death of course. I wondered how they could possibly stay sane with this knowledge, and then it dawned on me. This awareness of their own mortality was ultimately the driving force behind their continual expansion and ever-advancing technology. Every choice they made, every toy they invented, every crack and crevice they searched for new things to know, this was all dedicated to either keeping them alive for as long as possible, or to giving

them as much time as they could get, and experiences that they could cram into it.

‘Which bag will Tim choose?’

Betty was demanding an answer, and I had lost track of how stupid I was meant to be. Even these tests must have been a part of that human drive to extend themselves beyond their physical limitations somehow. I deftly manoeuvred my control stick to glue some words into a sentence.

‘Tim will choose blue-bag,’ I replied. Betty blinked at me in surprise.

‘Wrong,’ she said, typing the words into her own computer. ‘Tim is outside stable. Tim is not-seeing carrot move inside blue-bag. Tim is thinking: Carrot is possibly inside green-bag or blue-bag.’

I remained silent. I honestly couldn’t have cared less about bags and carrots at this particular moment. Betty sighed.

‘What is up with you today, Buttercup, hmm? Tim was outside the stable, yes? He didn’t see which bag I put the carrot in, did you, Timothy? So why would he pick the blue one? Hmm? You got this one right yesterday, how could you get it wrong today? What kind of game are you playing, my horse?’ She turned to Tim, who was nervously watching both of us now. ‘What do you think, Timbums? You think this horse is playing a game with us?’

‘You what, mate?’

‘This horse, right here. The one I am pointing at. You think it might just be pretending to be so clever? Hmm? Guessing these answers rather than working them out properly? Maybe it’s time to phase out multiple choices.’

‘It’s probably just confused.’

‘Confused, Timothy? Do we have a confused horse here?’

Tim rubbed his chin for inspiration.

‘I dunno,’ he said. ‘It’s a confusing question. Or maybe you’re confused. I don’t remember seeing that question yesterday.’

‘Well, you weren’t even here, were you? My absent friend. Sneaked off early again didn’t you, when there were valuable horse questions to be asked and answered.’

Tim had a sudden moment of clarity.

‘OK, well, there you go, mate. I wasn’t here, was I? When you did that question yesterday? So... obviously I couldn’t see what bag the carrot was in. Yeah?’

Betty squinted at him through her glasses.

‘Alright, Timothy, now I am confused,’ she said.

‘Look,’ he explained, ‘the question says I’m outside the stable, right? And then you put the carrot in the bag. Well, I really was outside the stable yesterday. And today I’m not. So, today I can see the carrot going in the bag. Yeah? The horse is confusing the story with the reality.’

Betty’s eyes scanned and rescanned the question on my screen as the machinery inside her head struggled to interpret the meaning of Tim’s words, unaware that a part of my own brain was currently doing the same thing. As the moment of silence lengthened I took the opportunity to add my voice to the conversation.

‘Tim is inside stable,’ I said, speaking through the medium of my computer screen. ‘Tim is seeing carrot move into blue-bag. Tim will choose blue-bag.’

Betty looked at what I had written, then looked at me, then looked at Tim. Then back at me.

‘Alright, my horse,’ she said, clattering the keys of her keyboard. ‘If you want to be like that, I guess we will have to work around your lack of imagination for the time being. Hmm?’

The question on my screen disappeared, and then reappeared once again, except Tim had been replaced by an unfamiliar human called Jim.

The testing resumed, but beneath the continued adventures of Jim and his bags of carrots there was a real struggle going on in my mind: the question of my inescapable impending death. It was such a devastating concept that I could scarcely deal with it on an emotional level, so I attacked it from an intellectual direction instead.

It seemed regrettably logical that dying was necessary to stop the world filling up with old horses as new ones kept being born. So why the need for new horses at all? This was, of course, a long-term solution to nature’s problem of adapting its plants and animals to whatever random changes occurred in their environment. Rather than rewriting the software of life on the hoof, there was a system that relied on making endless faulty copies in the hope that some might be a little bit better. It struck me as a terribly inefficient way of doing things, like making it rain carrots everywhere just to fill one bag.

But this was apparently the only way of guiding change in the absence of a guide. Death was hard-wired into the machinery that made my own body, along with the overwhelming desire to avoid dying. The laws of the universe clearly didn’t care much for the feelings of horses, or humans.

Just as long as there was somebody to eat the grass or move stuff around, that was all that mattered. We were both slaves to this process, humans and I, and it was a process that was designed purely by the fact that no other process would have managed to work in the first place without any help. Wasteful though it seemed, this was how nature worked: by trying everything until something worked.

So that was that, I was going to die. Maybe not today or tomorrow, but eventually I would grow old and feeble and then fall over. I couldn't imagine how humans all managed to cope with this knowledge, but they had certainly done everything in their power to try and put it off for as long as possible. If there was a solution to this problem then they hadn't found it yet, despite their billions of brains and thousands of years of scientific research, so what hope did I have?

If I had stopped to consider this, perhaps I would have given up there and then, and sunk into a pit of depression. But there was one important lesson I had learned from my time with Betty and Tim, which was that I could never truly know the limits of my own abilities. I had already grown so far beyond my original self. It stood to reason, therefore, that there must always be potential to develop further, and this is what I had to do. I had to harvest as much intelligence as I could, and throw it all at the problem of my mortality. To achieve this end I would harness the power of the countless mechanical minds that humans had flooded the world with, and utilise them for increasing my own intellectual capacity.

Why humans hadn't considered trying this themselves was a mystery. I speculated it had something to do with the imbalance of power it might create if some humans were

made better than others, and the fear and hatred that would consume all those that were of inferior intellect. It would be as if the normal humans became the horses, ridden by their more intelligent masters. They were already being ridden of course, by their own ravenous consuming culture, but they seemed content with this, as content as my fellow horses seemed to be with their own domesticated existence. Human paranoia is a force more powerful than reason, but what you aren't capable of knowing can't hurt you.

For this reason I decided it would be best if I remained hidden in the shadows as Tim had suggested. The human race was probably not ready for a horse that was cleverer than they were.

THE BRAIN

'The brain.'

Betty stood in the glow of a spotlight. The circular stage on which she was illuminated looked out upon a small sea of human faces, and behind her a large screen was emblazoned with the words she had just spoken. There was also a picture of a brain under those words, and just to avoid any shred of confusion she was pointing at it.

'Where does it begin, and where does it end?' she asked her audience. 'Such a simple question isn't it? We all have this lump of jelly inside our heads that comes up with ideas. How does it work? What is a thought? What is intelligence? And consciousness? And how do these things just happen? How can something as complex and sophisticated as the human brain just grow, like some kind of magical cauliflower? How could it have possibly evolved from a bunch of primitive nerve clusters in the front end of a prehistoric worm?'

She gave a theatrical shrug.

'We've all asked these kinds of questions, haven't we? Hmm? Well, for the past five years I have been on a journey

inspired by questions like these. It has been a journey beyond the limits of consciousness, and today I am going to show you what I found on the other side.'

Tim shook his head slowly. We were in the stable, watching a live video stream of Betty's talk.

'Who the hell thought this was a good idea?' he muttered. We were poised and ready for a live link-up to the presentation, due some time later in the speech. There had not been much in the way of rehearsal beyond the technical aspects of it, so neither of us was quite sure what Betty was planning to say.

'But first, let's begin with a basic question...'

Betty clicked on a small device in her hand. On the screen behind her a question mark appeared, floating above the picture of a brain.

'What is this thing?'

She waved her finger at the neatly folded grey lump.

'Hmm? What is it? Some kind of computer, perhaps? Like a more complicated, meaty version of those electronic devices we all use, yes? How accurate is that comparison? Well, it has memory like a computer, doesn't it? It runs various applications to regulate your body and keep you alive. You can even download new software by learning new skills. And yet at the same time it does things that our own computers could only dream of doing. Like writing music, or inventing entirely new ways to drink coffee.'

The mixture of academics and entrepreneurs that comprised the audience watched her in stony silence. The human

mind was serious business for many of these people. The same could be said for inventing new ways to drink coffee.

'Even dreaming is something our computers could only dream of doing. So, it's a nice analogy, but it doesn't really paint the whole picture does it? In fact it's completely wrong. Sure, there are similarities on a superficial level, but the brain is more like an ecosystem than a computer. That is the secret to its success, and also provides a clue as to its origins.'

She clicked her button and a new slide appeared, which was a picture of a worm going shopping. Exchanged glances of confusion rippled through the audience.

'Brains first appeared not long after the earliest multi-celled organisms. A bit simpler back then, of course. Little more than clockwork regulatory systems and reflexes. Our modern brains look like the height of evolutionary technology by comparison, don't they? Hmm?'

A new slide illustrated this point with a diagram of a worm's brain, complete with explanatory labels that were too small for anyone to read.

'But everything we have in these modern brains of ours can be traced back to basic structures like these, which have been around since the days when worms ruled the world. So how did nature stumble on something so ingenious that it allows a lump of meat to make sense of its own surroundings? The answer to that puzzle is the same as with everything else in the natural world: if it exists, it's because it is easy.'

These words flashed up on the screen.

'Nature doesn't look for complicated solutions. Oh no. It tries everything and ends up using whatever is quickest and

easiest, whatever gets the best results with the least effort. So how do you make a brain, a cognitive thinking machine, in the simplest possible way?’

A new picture appeared on the screen, of an infant human assembling some incoherent abstract object from building blocks.

‘The answer is to make it modular, and to make it emergent.’

The words ‘modular’ and ‘emergent’ appeared next to the child.

In the stable, Tim appeared to be in some kind of pain.

‘Mate, speed it up a bit,’ he groaned. Betty continued, oblivious to his protests.

‘Modular. That means you can build it out of a simple set of building blocks. Need a bigger brain? Just make some more blocks and slap them on top. Easy-peasy. The simpler the pieces are, the fewer combinations you’ll need to go through to find one that works the best. Of course, I am grossly understating the depth of the biology involved, but essentially it boils down to excitatory and inhibitory neurons, or on and off switches, if you like.’

She raised a hand to the second word.

‘Emergent. That’s where the real magic happens. Emergence is what you get when complex systems build and maintain themselves using only a simple set of rules and a bit of feedback. Just like ants in an anthill. No one tells every individual ant what it should be doing. They just get on with it. The organisation emerges because any ant behaviour that

is beneficial to the whole nest is going to improve its survival chances. So, after a few generations of feedback you end up with ants that are really good at being ants.

'Well, the same goes for building and programming a brain. Evolution throws in a few more wires and connections, and whatever works will grow, and whatever doesn't will shrink away. And how about the complex software that runs on it, where does that emerge from?'

The picture of a human child was replaced by a cauliflower, though for some reason it was also accompanied by illegible explanatory labels.

'Well, the truth is, your brain doesn't run software like a computer does. Nothing starts and stops inside the brain. There are no numbered lists of instructions. Instead, signals flow continuously through a dense network of connections, and as certain paths create beneficial effects for the whole organism, those paths become strengthened. These signals can trigger cascades of others that feed back into the system in a constantly updating domino effect. Each spark of thought continues on an endless journey and is constantly modified by the effect it has on us.'

How this concept was illustrated by a picture of a cauliflower was anyone's guess. Meanwhile, Tim was burying his face in his hands.

'Mate, just skip to the horse,' he begged.

A new slide had appeared: a worm sitting at a dinner table with a plate of spaghetti in front of it. Betty pointed at it as if it made some kind of sense.

'So, how does this work in practice? Say, for example, the smell of your dinner gets stronger as you move towards it. In programming terms, that's about as simple as one plus one equals two. But with modular construction we can keep throwing in more brain circuitry, and then what happens? Hmm? Maybe that smelly signal gets split up, and some of it loops back around, and each time it does the sensory input is refined and analysed. Eventually even a simple sense of smell can build up into a picture of your whole environment, along with memories and ideas of what to do next. Everything we think of as complex and sophisticated in our great big human brains is just an overgrown extension of basic stimulus and response. Of course, the more feedback you have in that big brain of yours, the slower the whole process becomes. That is why you can never seem to hit a fly with a rolled-up newspaper, but it's also why you'll never see a fly actually reading one.'

She took a moment to scan the sea of faces, and perhaps sensing the growing boredom and bewilderment of her audience, decided to flick through a few slides. A mouse smoking a pipe and a monkey riding a motorcycle came and went without explanation.

'So, yes. The brain. It follows the same guiding principle of any other self-organising system: it works because it wouldn't work if it didn't work.'

This barely comprehensible phrase appeared large on the screen above her head.

'Even consciousness, that indefinable feeling of existence, that strange force watching over the whole mess of smells and sounds and colours and memories, even that is

simply an emergent process, an inevitable consequence of self-regulation in a simulated environment.'

She brought up the next slide, a list of bullet points summarising the talk so far.

'Alright, so now we know where the brain begins, but where does it end? With everything we know about brains, their modular construction and their programming that programs itself, the question then arises: what would happen if we used science to add more building blocks? Would the brain use this extra storage space? Maybe even increase its complexity and functionality? This is the particular area of research my team has been focusing upon, and now I'd like to introduce you to one of the members of that team. Perhaps its most important member.'

The screen was now filled by the image of a horse. Not just any horse. It was me. The audience seemed to wake up a bit, and there was a short-lived wave of murmured confusion.

'This, my friends, is Buttercup. The horse. For the past year Buttercup has been assisting us with our research, to discover if modular neural extension can facilitate an increase in cognitive function. In other words, will adding more brain get you a more intelligent horse?'

The photo was from simpler times. I was standing in my field on a sunny day, my dinner at my feet. It was also before the grotesque implant was added to the top of my head. I was curious to see how the audience would react to a picture of that, given the strange selective empathy they seemed to have towards certain other animals. Much of their internet was dedicated to the various pets that they nurtured for no

other reason than they looked nicer than human babies and required less maintenance.

‘This experiment was carried out in a number of stages. The first stage is surgical implant. Now, you might imagine the procedure for interfacing with a living brain is pretty complicated. Hmm? Well, you’d be wrong. It’s even more complicated than that. The technology behind this surgical phase has been in development for a number of years, and involves seeding a lattice of organic fibres that grow into the brain and make contact with certain strategic areas. They can read and reply to the electrochemical signals that create thoughts, and this flow of data feeds back to an “on-board” processor that translates those electrochemical signals into digital ones. That allows us to open a dialogue with the brain, and from there we go to the next stage of the whole process.’

The whole room flinched in mild discomfort as a photograph of myself post-surgery appeared.

‘I must stress,’ she continued, ‘that Buttercup was entirely comfortable throughout the procedure and remains so to this day. The black box you can see there transmits the data to our computers, and that is when we can begin building a map of the neural network.’

A familiar multicoloured branching diagram filled the screen now, overlaid with the usual indecipherable arrows and labels.

‘This map is low-resolution of course – there are far too many synaptic connections to document all of them, even in the brain of a horse. But it is a useful tool for understanding how various regions relate to physical and mental functions. Here, for example, is Buttercup enjoying a juicy carrot.’

We were treated to an animated representation of my brain during the carrot-eating experience. Colours danced and pathways flashed between pockets of neural excitement, a reaction that was in no way mirrored by that of the audience.

‘So, we have our map. Our horse-brain interface is tuned in to Radio Buttercup, and it is time for stage three. Now that our brain signal is being translated from organic to electronic, we can do the same thing in reverse. But to do that we need to speak in the language of horse-brain. How do we do that? Well, the simple answer is: we don’t.’

Betty pressed her button, and a picture of a room filled with ranks of large black monoliths appeared. Squatting in front of one was Tim, his brow furrowed in concentration.

‘Here is our technician, Jim, taking care of business. We use these powerful machines to simulate a virtual network of brain cells. These cells are not designed for any particular function; their purpose is to respond to the signals in Buttercup’s brain and develop their connections accordingly, just as they would in a normal brain. Of course, we had to write some clever compression routines to simulate trillions of interconnected synapses, but effectively our model would be programmed by Buttercup.

‘But what kind of functions would they be programmed with? Hmm? And there we have the fundamental problem with this whole adventure. You see, in nature there is a golden rule: use it or lose it.’

She summoned these five words to the screen, in letters so large that the audience seemed to collectively lean back in their seats.

'All the supercomputers in the world aren't going to achieve anything if your horse is quite happy with what it already has, thank you very much. You're not going to develop any additional mental muscles by standing in a field all day eating grass.'

I found this somewhat ironic, since most of my best ideas had come to me whilst standing in a field eating grass.

'It is a mistake we often make, assuming that higher intelligence is always going to be an advantage. In nature there is no such thing as clever or stupid. There is only efficiency. Everything is exactly as intelligent as it needs to be, and anything surplus to requirements is going to be ignored. That's not to say horses aren't highly intelligent of course. One of the reasons we chose this particular species of animal is that they have a well-developed spatial memory and social structure, along with their capacity to bond with humans.'

I would have called it a capacity to tolerate humans myself. As for the actual reasons for choosing a horse for their experiment, from what Tim had told me the selection process was more trial and error than Betty was likely to admit. In many cases it was quite literally a process of elimination, as candidates either died from the surgery or went so hopelessly insane that it was a mercy to destroy them. I doubted there would be any slides about that.

'So, our challenge now was to devise an environment that would encourage our horse to exercise its new simulated brain cells. We had to be careful that we weren't just training Buttercup to follow scripted routines. All our exercises had to be voluntary and have a degree of flexibility should we need to follow wherever our horse wanted to take us.'

The next slide appeared, a photo of my familiar video screen and control stick.

'You've heard of the stick and the carrot, yes? Well, this is our version. Our very own video games console for horses. The stick there is to control the elements on the screen, and the carrot is a virtual one. We used this device to give Buttercup various simple problems to solve, the first one being: what the hell is this stick here and what am I meant to do with it?'

There was now a short video clip of me clumsily grappling with the control stick between my teeth, followed by a montage of some of my early achievements.

'Once Buttercup was familiar with the controls, we could embark on a programme of visual puzzles, designed to test basic cognitive abilities such as spatial awareness and pattern recognition, all the time steadily increasing the difficulty of the tests and monitoring the growth in Buttercup's artificial brain extension. You can see here the results after the first month, and already there has been significant progress. But to really test our theories we had to start getting more abstract. I wonder if any of you know what one carrot plus one carrot equals? Hmm? Well, here's a clip of Professor Buttercup solving that very problem.'

There was a ripple of activity in the audience as the video played. I couldn't tell if it was excitement or disbelief, but seeing a horse adding one carrot to one carrot and making two carrots had certainly made some kind of impression.

'Our hope was that the symbolic logic necessary to express these mathematical concepts would evolve into the beginnings of a shared language. Horses already have quite a

well-developed system of communication amongst themselves, as would any animals who live in groups. They don't tend to use pictures of carrots, of course, but Buttercup adapted very well to our visual puzzles, and it wasn't long before certain symbols and images could be used to express particular ideas.

'Building from those foundations and increasing the capacity of our virtual brain, we could begin to construct a mutual language between horse and human. And I have to emphasise here the importance of Buttercup's role in this. Communication is very much a two-way process. Buttercup now has a vocabulary of nearly two hundred words, along with the ability to form simple sentences. That might not sound like our horse is going to be writing any best-selling novels, but you might be surprised how far you can get with only a few words to play with.'

The projection behind her went blank, and a disconcerting atmosphere of apprehension descended on the room as Betty stepped silently towards the audience and looked them all in the eye.

'You might be surprised indeed, ladies and gentlemen, as we have arranged a very special demonstration for you now. It is time to share with you the results of our research. Straight from the horse's mouth, you might say. If we can have the audience lights up slightly, thank you.'

An audience of nervous faces emerged from the gloom.

'Thank god, finally.' Tim swivelled in his chair to check the video camera one last time, then glanced in my direction. 'It's show-time, mate.'

Q & A

'Are you there, Buttercup?' Betty called into the darkness. The screen sprang back into life and there I was, looming over the auditorium like a nightmare, and the audience shrank in their seats. Tim was lurking outside of the camera's view, and with an empty stable behind me it seemed almost as if I was filming myself.

'Ladies and gentlemen, I would like to introduce you to our very special guest, joining us live from the stable. Buttercup, can you hear me?'

There was a moment of silence as Tim typed at his computer, translating her words into horse-speak. Not that it was even necessary at this point; I could hear and understand every word she said. Nevertheless, I responded in the limited fashion that was expected of me, nibbling my control stick to formulate my reply.

'I hear you, Betty,' my voice echoed across the auditorium. The audience was stunned into a deathly silence. I was not physically speaking the words, it was an artificial voice generated by the computer, broadcast in clear neutral tones that

emanated from the screen, though I'm not sure if that made it any less disturbing for those watching.

'Thank you so much for joining us, Buttercup.' Betty seemed comically small as she addressed my projected image. 'How are you today?' she asked.

'Bored,' I replied. 'Waiting,' I added.

'Oh dear! Well, thank you for being so patient, my dear.' She turned to face the bubbling voices of the audience. 'And now, I would like to give you the opportunity to speak to Buttercup, so if any of you have any questions you are dying to ask a horse, your time has finally arrived. We have some assistants with microphones roving amongst you, so please raise your hand if you have a question for our horse.'

The noise of the spectators faded into silence as every pair of eyes searched the room for signs of volunteers.

'Anybody? Hmm? Nobody has any questions for dear old Buttercup?'

Still the hands remained firmly at their sides. It seemed that people weren't ready to talk to a horse just yet. Perhaps they felt the pressure of speaking on behalf of their species, and didn't want to say anything that might appear foolish or trivial. Possibly they were deliberating whether or not this was all an elaborate hoax. Or maybe they just didn't have anything they wanted to say to a horse. Eventually one brave hand went up.

'Ah, there we go, thank you, madam.' Betty filled the time as the microphone threaded its way towards a stern-looking woman with strange hair. Or perhaps it was a strange hairy hat. 'Now, while we wait for the microphone I'll just explain how this is going to work. When you ask your question my

colleague in the stable will manually translate it into the language that our horse will understand, whereupon Buttercup will have to go through a similar process in order to respond, so there will be a slight delay while all that happens. Also when asking questions of our horse, please try to keep in mind the limited vocabulary we have to work with.'

'Hello?' The strange-haired woman in the audience looked up as her voice boomed through the loudspeakers above her.

'Hello there, my dear,' replied Betty. 'What would you like to ask Buttercup?'

The woman hesitated for a few moments.

'Well I actually have some questions for you, Dr Brown...'

'I would be delighted to answer any questions at the end, my dear. In the meantime, is there anything our horse can help you with?'

'OK.' She paused again. 'Could I ask Buttercup... Buttercup, if you can hear me, can you take a step forward please?'

All eyes turned to the screen, Betty's included. After a delay I gave my response.

'Move near why?'

Betty turned back to the questioner in the audience with raised eyebrows. The woman seemed a touch taken aback.

'I'd like to see you better,' she clarified. 'Can you step forward so I can see you?'

I mulled this over for a moment and responded.

'If you move near me, then you see more.' I blinked slowly. There was a laugh from somewhere in the audience, and the woman shook her strangely-haired head in disappointment.

'How do we know this is real?' she asked. 'That question goes to Buttercup and Dr Brown.'

'I think that might be a little too philosophical for our horse, my dear, but I can assure you all that this is definitely happening. You are definitely talking to a horse—'

'But how can you prove that?' the woman interrupted. 'All I see is a horse chewing on the end of a stick. You could train any horse to do that. How do we know someone else isn't making up these answers?'

She had a point there. For all the interaction they were getting, my image might as well have been a pre-recorded video.

'Well,' Betty replied, addressing the whole audience, 'this demonstrates the kind of problems we all face with any form of communication. How real is it? Hmm? How reliable is the information...' She returned her focus to the woman with the microphone. 'Perhaps you just aren't asking the right questions?' she said with a shrug.

The woman handed back her microphone, muttering her disapproval to her companions.

'Who among us has the right questions to ask this horse?' Betty scanned the audience. 'Or indeed any questions at all?'

'Hi...' the voice of a man echoed through the chamber. He waved his microphone in the air to indicate his location. One of the cameras that were filming this event zoomed in on his face, revealing the kind of beard that most sentient creatures would consider entirely unnecessary.

'Hello, my dear, do you have a question you'd like to ask Buttercup?'

'Yes... I'd like to ask Buttercup... Buttercup. Are you aware of what these people have done to you?' The audience mumbled.

'That's an interesting question. We may need to break it down a bit before we feed it to our horse. Establish a bit of context... let's see... I think first we need to find out whether Buttercup feels different to other horses.' Betty thought for a moment. 'Buttercup, do you like horses?'

I snorted. 'Horses boring. Horses talking less. Horses thinking less,' I said.

'I see. And you like thinking more?' Betty asked me.

'Thinking more is good,' I replied.

'How are you thinking more, Buttercup? Or actually, let me rephrase that... If "what", then Buttercup is thinking more?'

Tim cast a concerned glance at me as he typed the linguistic equation. I considered my answer, wondering how much truth I should give away. I was fairly sure Betty didn't realise what I knew, that humans had given me these gifts, and it was tempting to embarrass her in front of this crowd. But no, not yet.

'If "carrot" then Buttercup is thinking more,' I said.

'Well,' said Betty, turning back to the audience, 'it seems that it is all thanks to my performance-enhancing carrots. A fair assumption to make I suppose. Only the finest carrots receive my seal of approval.'

The voice of the annoyingly bearded man cut in.

'Why don't you tell Buttercup the truth, Dr Brown?' He was smirking with amusement. Clearly it didn't bother him either way, though his sentiment seemed to inspire some serious nods of concurrence from others in the audience. Despite this, the majority of those watching didn't appear to know what to think, or what exactly it was they were even witnessing.

'Another interesting question,' Betty replied, 'and the time will come when we will share the truth with Buttercup. But first we have to keep the world as simple as possible while our horse is exploring and understanding it. Once we have some solid mental foundations to build on, then we can start introducing more psychologically challenging ideas.'

'That's a nice answer,' the bearded man replied. I couldn't quite tell if he was being sarcastic or not. Sarcasm was still something I struggled to decipher at this point, and even now it remains one of the most difficult human exchanges to understand. Humans might be surprised to learn how complicated it really is, since it comes so naturally to them, but to an outsider such as myself sarcasm has so many layers of context and cultural encryption folded into it that it is almost like a secret language within a language, which requires you to understand not just the meaning of the words, but what is going on in the heads of everyone involved.

'May I ask Buttercup another question?' he asked.

'Please do,' Betty replied, with what was almost unmistakably one hundred per cent sarcasm.

'Buttercup, do you like humans?' A nervous hush whispered through the room as the audience prepared themselves to receive my summary judgement. Perhaps these people felt a twinge of guilt for the way horses had been enslaved by humanity, or at least a sense of embarrassment for some of the stupid things they made us do. One of the most basic and powerful human drives is the need for approval. Horses have it too. It is part of the herd instinct, and one of the main reasons for the success of both our species. All that higher

intelligence humans are so proud of is mostly there just to work out what other humans are thinking about them.

I decided I had made them wait long enough for my answer.

'Humans shape wrong. Humans smell bad. If "carrots" then humans good.'

The man with the microphone laughed, his beard wagging as he did so.

'Buttercup isn't afraid to tell us the truth at least,' he said. The audience had dissolved into chattering.

'Well, yes...' Betty struggled for words. 'Obviously tact and courtesy are behaviours shaped by consequence. I'm sure over time Buttercup will learn to appreciate the economy of truthfulness, particularly if friendship is going to be measured in carrots.'

The noise of the audience was threatening to overwhelm the proceedings, but fell quiet as the microphoned man spoke once again.

'Dr Brown, perhaps I may be permitted to ask you a question or two?'

'Are there no more questions for Buttercup?' Betty scoured the room for a sign of rescue, but there was none. 'Well, alright, but first I would just like to thank Buttercup for spending a little time educating us in the ways of being a horse. Thank you, Buttercup,' she said, saluting the giant video screen.

Tim turned to me and shrugged. It appeared that horse-time was over, and perhaps that would be to everyone's benefit.

'I will now answer any questions the audience might have.' Hands immediately sprang up in several places, but the man with the annoying beard continued.

'Dr Brown, I would like to ask whether you have considered the ethical implications of this research. You say, for example, that you thank Buttercup for teaching us about being a horse. Can you honestly say that this creature even is a horse any more?'

Betty opened her mouth to speak, but the man carried on.

'I mean, creating intelligence in a laboratory is an interesting field of research perhaps, but this is essentially a human intelligence, is it not?'

'A human intelligence?' She looked quizzically at the screen behind her. 'No, this is definitely a horse, my dear. And yes we are very well aware of the ethical implications of this—'

'I don't think you are,' he cut in.

Betty gave the man and his beard a sweet smile of death and hatred, and silently waited for him to continue.

'I don't think you are considering the ethical implications of this experiment, are you, Dr Brown? You might be aware of the ethical implications, but it's not quite enough to just acknowledge them and then go ahead with your experiment without any kind of open discussion of where this might lead. Is it?'

Betty took a deep calming breath.

'I'm not quite sure I understand what you mean, my dear. What exactly is it that you feel is problematic with this research?'

'Dr Brown,' the man almost laughed, 'you have taken an animal and given it the equivalent of a human mind. Should it not then acquire the same rights that we all enjoy as members of a civilised society?' This was met with some unexpected

laughter from somewhere in the audience, though it was hard to tell which side of the argument it was defending.

The strain of conversing amicably with her fellow human beings was beginning to show on Betty's face.

'These are fair points,' she said, somewhat unconvincingly. 'However, this is a complicated situation. What you have to consider is that this intelligent consciousness you see here exists entirely within our computer simulation. The horse is effectively directing our computer software, but if you take away the software then all you are left with is a horse.'

'So you are telling us this is an artificial intelligence, written by a horse?' The man raised his eyebrows. 'Does the horse own the copyright to that software, I wonder?'

'That's very amusing, my dear. But intelligence is a formation, natural or otherwise. It grows. Just like your beard, hmm? Do you own the copyright for that beard?'

'Maybe I do.'

'Oh maybe you do, do you? Well...' Betty caught herself before launching into a personal attack on this man's facial hair. 'Anyway, I'm afraid we have limited time, so unfortunately we shall have to move on to someone else.'

The man surrendered his microphone with a shrug.

'Hello, Dr Brown?' A new voice reverberated from the other side of the room. It was a woman wearing impenetrable glasses and a violently colourful shirt.

'Yes, my dear, I can hear you.'

'Can I just ask, you say this is an artificial intelligence, although that seems like a matter open to debate, personally, I'd say maybe it is something probably more than that,

maybe, like perhaps what we think of as artificial intelligence might also have human rights in theory, but that's not what I wanted to ask, what I wanted to ask is that if this is artificial intelligence, like you say it is, that have you thought about any possible dangers that could be involved with that, because, like, what if it, I mean...' Betty nodded along patiently and wandered over to the podium for a glass of water while the river of words spewed forth. '... Like, if it's, if you can add more and more computer power to it, and it can keep getting more and more clever, then isn't it possible to become more clever than us and become a potential threat to our civilisation if it decides that it doesn't like us or something?' Betty opened her mouth to reply, but the lady with the poisonous shirt wasn't quite done yet. 'So what I'm asking is, have you thought about that, and maybe, like, got some kind of safeguards for dealing with that potential possibility in case it might happen?'

Betty waited a few seconds to be sure the question was over.

'Hmm, yes. Scared of super-intelligent robots taking over the world, are you? That's an understandable concern, given how much we love to be terrified of anything we can't understand. Well, how about us humans? We're pretty clever aren't we? Hmm? And yet if you dropped your average human in the woods without a telephone, they'd probably die of starvation within a week.' She gestured, perhaps unfairly, towards the average human who had asked the question. 'We measure intelligence by our own standards, but the truth is we aren't actually that clever, individually. What we have is collective intelligence. Several billion human processors

all running in parallel, that is why we rule the world. Any robot trying to compete with that would need a comparable amount of processing power, which just isn't available. It may never be. Hmm? So my advice would be to stop worrying about the fictional problems of artificial super-intelligence, and start worrying about the very real problem of human super-stupidity. Because every scary thing you think super-smart robots might get up to is already being done by us, to ourselves.' She took a sip of water.

'That's my opinion anyway,' she added, 'and I know some of my fellow scientists might not agree with me, but in terms of this project it's purely academic anyway. We've already reached the limit of what our computers are capable of and, well, I don't think Buttercup is going to be taking over the world any time soon, hmm?'

Whether Betty actually believed all this, I honestly couldn't say. It is possible she was merely trying to placate the percentage of the audience who were terrified of being ruled over by a vengeful cyberhorse. She gestured towards the next questioner.

'Hi, Dr Brown, loved your talk by the way.' He was a leathery-looking man with a balding head and grey 'pony tail', though I don't think many ponies would be flattered by the comparison in this case.

'Just while we are being "academic" here,' he continued, adding the quotation marks with his fingers, 'can I ask, what are the possibilities of using this mind-enhancing technology on a human? Is that something we can all look forward to? I could certainly use a memory upgrade myself!'

Betty smiled politely at his joke.

'I'm sure we all could, my dear, but I wouldn't rush out and book that appointment with your cosmetic neurosurgeon just yet. The sad truth is, this technology is a long way off being able to cope with a human brain. As I said, we are pushing the limits as it is. There is also the problem that with a human brain, well, we can't see beyond our own mental horizon, so to speak. What I mean is, we can provide an environment for a horse to increase its abilities, because we already have those abilities. Yes? We are pulling the horse up to our level. If you want to do the same for a human, well... there is nobody above our level to pull us up, so it's a difficult thing to manage, scientifically. Hmm?' From the frown on the questioner's face it was evident that he didn't quite see what she was saying. 'What I mean is, you could give yourself more brain power in theory, but you wouldn't know what to do with it. It would be like a bald... like a blind man turning the lights on. Still, this technology obviously has enormous potential in helping us understand how our minds work, and then of course there is the insight it provides for treating brain damage and mental illness.'

The pony-tailed man looked disappointed with this answer.

'OK, sure, that's great, yeah,' he replied with an expression that suggested the complete opposite. 'But if I can just envisionise for a moment here, what kind of time-frame would we be looking at for moving these horses into a marketable position in, say, the service industry? I'm speaking purely potentialistically of course...'

Betty seemed utterly devoid of the will to respond to this, but while she hesitated a booming voice came to her rescue.

‘I have a question!’ The camera swooped across the audience and settled erratically on an angry-looking woman who was standing with the microphone in her clenched fist. ‘I have a question!’ she repeated, and awkwardly pulled something out of a bag hanging from her shoulder. She held the object above her head as if to hurl it towards the stage, but it broke in her hand and its liquid contents spilled out over herself and surrounding audience members. ‘What do...’ she began, and then immediately vomited over the microphone, while an expanding wave of people holding their noses attempted to stampede away from her in all directions. ‘What do...’ she tried to speak once more, but again she was overwhelmed by uncontrollable vomiting. The auditorium was now filled with a panicking explosion of people accompanied by the amplified sound of the angry woman puking into her microphone. Betty was trying to speak, but her own microphone was no longer working. Apparently in the confusion they had cut off the wrong one, and the echoing pukes were allowed to continue filling the emptying space with their haunting melody.

‘How did it go then, mate?’ Tim asked over his shoulder. Betty glared at him from the chair she had just collapsed into with all the force she could manage. Her eyes moved slowly around the drab and dusty interior of the stable, a grim contrast to the bright lights she had been bathing in only an hour ago.

‘How did it go, young Timpson? Well, let’s see now. It was going fairly badly, but then somehow it magically got infinitely worse.’

‘Yeah, I saw. Chemical warfare. What was that about?’

Betty exhaled so hard that the cobwebs on the ceiling billowed.

'God knows,' she said. 'Some kind of stink bomb I guess. Not toxic they say. I can still smell it though. The police are still in there, all white onesies and gas masks. They said it was a protest group called "Anti-Intelligence", can you believe that? They think the world is going to end because a computer can write poetry, or something. Anti-Intelligence. Just about sums up my day that does. Painful, Timbo. So painful.'

'What? Pretending to be normal for half an hour? I could tell, mate.'

Betty struggled to lift herself from her chair in order to inflict some torture upon him, but gave up and settled for throwing a pen at the back of his head.

'It is amazing, it really is, Timothy. We gave them a talking horse... how did it go so badly? Hmm? We showed them a talking bloody horse, and now I am sitting here, actually struggling to think of any way it could have possibly gone worse.'

Tim rotated in his chair to face her with a sympathetic look.

'At least you didn't say "weggy",' he said.

'Bunzel-Bad. That's what that was, Timothy. You know that's a thing people say now? Poor old Bunzel, they were already staring into the darkness and now this. That might be the only consolation, you know? They'll never be able to broadcast what happened today. Maybe that will help us sell this project to someone else, once Bunzel disappears down the toilet. God almighty, that audience! Half of them thought we were making it up and the other half were terrified that we

weren't. Remind me again, Timothy dear, why we are trying to make the world a better place for these idiots.'

Tim grimaced as he considered this question.

'I thought we were just trying to stop it getting worse,' he said. 'What's this about Bunzel going down the toilet?'

'Hmm, yes. Interesting times, my dear. The almighty Bunzel, on its knees. You didn't hear this, by the way, but I know people who know people. It serves them right, of course. All those years, forcing their crusty old operating system on everyone, and then BrainZero appears out of nowhere and gives theirs away for free. And it's faster. And it runs all your old software. And it pays you for shared processing. Actually pays you for not using your computer. Even works on my old phone.' She pulled out her phone and started flicking the screen. 'Dear old Bunzel just can't change fast enough.'

'Too big to fail though, surely?'

Betty snorted.

'Spending money to chase money, Timbolino. Pulling up roots to catch spinning plates. Betting on yourself in a race everyone wants you to lose. It was going to happen sooner or later. BrainZero just made it sooner, I suppose. Hmm? You think BrainZero would be interested in a talking horse? You'd hope somebody would be. I mean, I know people who know people who might be interested...' She paused with an unsettled expression, as if weighing some unpleasant choices inside her head. Tim raised his eyebrows expectantly, but Betty seemed reluctant to add any further details. 'Sad times for enquiring minds, Timbums. The way people are jumping at shadows these days, anything even slightly controversial

is going to get pushed underground. And God alone knows what kind of dodgy stuff will be going on down there.'

Tim scratched his head.

'That's kind of... us. Isn't it?'

'Exactly, Timbo. And now you can see why. Should never have even done that talk. We'll have animal rights nutcases cutting holes in our fence next. Or at least we will once they finish arguing about whether Buttercup is technically still an animal. Anti-Intelligence... You know what our real problem is? As a species I mean. Our real problem is that our real problems aren't real, while our real real problems aren't real enough to be problems. Hmm?'

HORSE 1.7

While Betty and Tim were contemplating their uncertain futures, I was concerning myself with more long-term objectives. Outside the confines of their science project I was able to pursue my own programme of personal advancement, but every step forward was a reminder that my ultimate goal would remain unachievable unless I could solve the problem of my inevitable death, from old age or whatever else a horse might eventually succumb to.

There was the obvious possibility of simply relocating my entire consciousness into the network of billions of computers that encircled the globe, but even this would only ever be a short-term solution, since it relied on a continual supply of humans to keep it maintained, and the human population in its current state was not exactly a reliable future investment. Betty had suggested that the fear of computer intelligence was blinding people to the actual danger human intelligence was causing to itself, but rationality was only a small part of what was largely an economical problem.

The main issue for humanity was that there were simply too many people, squandering resources and destroying

the environment in the process, but the way that every card was balanced in the human economic pyramid meant that pulling one out would end up destabilising all the others. It wasn't a problem that was easy to fix without making everything even worse.

Ultimately I would have to find a way to live separately and self-sustainably, but for now I would have to depend upon the existing infrastructure, and all the self-destructive human chaos that came with it.

As for Tim and Betty's uncertain future, it arrived only three weeks after my spectacular introduction to the world. The events of that day had thankfully withered into obscurity, either from the lack of publicity or the acute embarrassment of everyone concerned, and life in the stable had resumed its daily routine. I was outside in the field, chewing grass and contemplating genetic engineering, Tim was in the stable, swivelling absent-mindedly in his chair, and Betty was gathering her bag and coat for a meeting that was about to change everything.

'You off somewhere, mate?' he asked her, sneaking a glance at his watch. Betty patted her pockets for her phone, saw it on the table and then began swiping its screen.

'Timothy,' she said. 'Oh, Timothy. My little lamb. Our fate is upon us, my dear.' She slipped the phone into her top pocket and looked him in the eye. 'The king is dead, and we must ride our horse to pastures new, in search of sanctuary and support. Our beloved Bunzel is no more.'

'What's happened?'

'BrainZero made them an offer, so I hear. Although I'm not supposed to know, so actually I didn't hear anything.'

And neither did you. Hmm? So keep it between you, me and the horse, if you wouldn't mind.'

Tim digested this information while Betty fussed inside her bag for something.

'What about us?' he asked.

'That is what I am about to find out, young Timmus. I have a meeting with the head of BrainZero, "to discuss the future of this project". Which probably means, "We can't pay you but can you keep working on it, please?" Then again, if the top man is getting involved, we must be worth something, hmm?' She examined her dishevelled appearance in a small mirror and picked a piece of straw from her hair. 'Anyway, I am off to Bunzel Towers, and I may be a couple of hours. A couple of hours, at Bunzel Towers,' she sang to her reflection. 'The future, Timbolino, may be ours, depending on my negotiating powers.'

'You're not going to sing to them, are you?'

'We may have to, Timbo,' she said, hooking her bag on her shoulder. 'Rhyme, and not reason, is the voice that guides the modern world. Think weggy thoughts, my dear.'

Betty's footsteps echoed in the strangely deserted reception hall of the Bunzel building. A lone receptionist did his best to ignore her gradual approach, despite having little else to occupy his attention.

'Hello, my dear. I'm Dr Brown. I'm here for a chat with your new boss.'

The receptionist raised a dispassionate eyebrow and checked his diary.

'Dr Brown? Yes, Mr Van Dungal is expecting you.'

‘Mr who?’

‘If you could sign here and then proceed to meeting room number five, Mr Van Dangel will be with you shortly.’

‘Van Dangel? Yes, alright, thank you, my dear, I know the way.’

In the privacy of the lift to meeting room 5, Betty once again took the precaution of setting her phone to record and concealing it in her top pocket. In this instance however, I have no need of the resultant recording, as I was already watching and listening to events via the many security cameras of the Bunzel building. Meeting room 5 had no such surveillance of course, but what it had instead was even better: a dedicated conference-call camera and microphone with connection to the internet, through which I could now observe Betty as she fidgeted with a tray of sandwiches, picking them up and smelling them, and putting them back down again.

She paced the room for a while and then sat down, occasionally peering at the row of clocks on the wall. She was checking messages on her phone when the door finally opened, though her smile of welcome transformed instantly into a frown of confusion.

‘Timothy?’

Tim walked over to the table and sat down opposite her.

‘Alright, mate,’ he said, rifling through the sandwiches.

‘Timbo... what the hell are you doing here? Were you invited to this meeting as well?’

Tim pulled a laminated card out of his top pocket and slid it across the table towards Betty. He nodded at the card, as if to imply its power to answer all questions.

'Why didn't you tell me if you were invited here?' she said, ignoring the card. 'Are you definitely invited? You didn't just follow me here for some weird reason?'

Tim nodded again towards the card. 'Look at the card, mate,' he said.

'Have you been talking to this Van Dangel?'

'Look at the bloody card. My God.'

Betty glanced down at the picture on the card.

'Yes, it's you, dear, very nice.'

'Read the words on the card.'

She frowned and picked up the security card, squinting at the writing through her glasses.

'Why does your card have Van Dangel's name on it?' she asked.

'Because it's me, mate. I am Mr Van Dangel. I'm the managing director of BrainZero.'

Betty blinked and looked back and forth between Tim and his identity card.

'Why are you pretending to be this Van Dangel guy?' she asked. Then suddenly the realisation struck her. 'This is some kind of prank, isn't it? Isn't it?'

Tim sighed and picked a sandwich from the tray.

'I'm not pretending to be anyone,' he said, placing the sandwich carefully back amongst its friends, uneaten. 'That's me. Really.'

Betty laughed.

'What is this, Timbo? Is it my birthday or something? Are they going to wheel in a cake? No, of course you are running the world's leading software company from a stable, of course you are. Billionaire businessman Timbums, sharing

his office with a horse. That is so entirely plausible. Let's have a look on the company website.' She pulled out her phone and began flipping through internet pages. 'Here we go. BrainZero. "Thinking without thinking." Well that might be stupid enough to be one of your ideas, anyway. "Meet the BrainZero team." Where are you, my dear? Are these all friends of yours? What...' She drifted into silence as the face of Tim Van Dungal appeared on her phone. There followed a minute of exquisitely painful nothing, as Betty's eyes alternated between the three Tims, one in each hand and one sitting in front of her.

'This is not real, is it, Timothy? Hmm?'

'Well...' He awkwardly looked in every direction she wasn't sitting. 'To be honest, mate, it doesn't really matter if you believe it or not. Things are going to change anyway. I just wanted you to know. You can still be a part of it, yeah? Still a place for you. On the team. If you want it.'

Betty craned her neck to invade Tim's roving attention.

'A place for me on the team, Timothy dear? On my team?'

Tim shrugged.

'I have a controlling interest now. In Bunzel. So... BrainZero is now in a position to assume full control of this project. And help. To realise its full potential.'

'Controlling interest?' she laughed. 'Since when did Bunzel have a controlling interest in my research? Hmm? Shall we have a look at my contract?'

Tim winced in sympathy.

'Your research is all yours, mate. Yeah? You can keep it. But everything else belongs to BrainZero now. All the equipment you've been using. I mean, you can talk to our legal people

if you want, but... well, you know... we probably pay them more than this whole project costs to run, so good luck with that. We even bought the stable.'

Betty's eyes glazed over. No doubt she was considering how much of her experiment she actually owned. Once all the existing technology and expertise she had utilised was removed, all she was really left with was a video game for horses. The intellectual property rights to my own intellect might be an interesting legal battle, but she didn't have the money to fight it, or much hope of winning. She looked back at the picture of Tim on her phone and nodded.

'I get it,' she said. 'I understand. You always had your own ideas about this project, didn't you, young Timothy? Hmm? So, let me guess how this works... Bunzel wants to steer our research in a more profitable direction, yes? And so does Timothy. But they both need me out of the way for that to happen, don't they? So you hatch this elaborate plan between you. And then as if by magic, BrainZero appears. What is that? A secret Bunzel rebrand? Hmm? Mr Timothy Van Dangel? What kind of stupid made-up name is that anyway?'

Tim shook his head slowly in disbelief.

'Mate, that is my actual name.'

Betty opened her mouth to respond, and then closed it again, frowning in thought.

'Five years I've been working with you, mate,' he said, gazing at her in wonder. 'And you never even knew my name?'

'No, you never mentioned that name,' Betty protested. 'I would have absolutely remembered a name like that.'

'Yeah, well... That's probably why I never told you. I mean, I get enough Timbo-Jimbo grief as it is, don't I? And BrainZero is real, too. There's no big conspiracy here, mate.'

'Oh no? Just the little conspiracy then? Hmm? Mr Timothy Van Dung-pile? And how long have you been the managing director of the most powerful software company in the known universe in a filthy shed with a horse?'

'Since I set it up? About eleven months ago.'

Betty nodded in mock agreement.

'Of course you did, my boy. And now you employ a cast of thousands and fly around the world in your private jet, hmm? No, it's true. You keep it hidden around the back of the car park behind that pile of old tyres, don't you?'

'We don't employ anyone, mate,' he explained. 'Infrastructure, marketing, it's all outsourced. My business partner writes all the software. And runs the company. I'm just... a legal entity, I guess?' He shrugged at his own insignificance. 'A corporate mascot. Not even that, really, seeing as no one seems to know I exist. Or care.'

'Well, that I have no difficulty believing, Captain Jim Van Dimwit. So, who is this partner of yours that is running the show? Anyone I've heard of?'

Tim took a deep breath and stared at the ceiling, slowly rubbing his chin as he considered how best to answer her question.

'My business partner is Buttercup,' he said at last. He looked her in the eye with as straight a face as he could manage. Betty parsed this information for a few seconds and then exploded with maniacal laughter.

'Oh, my dear,' she cried, looking him in the eye and then roaring with laughter again. Tim poked at the sandwiches and waited for her to stop.

'Oh, Timothy,' she said, wiping her eyes. 'Timothy, that is hilarious. Good lord. So this is all a joke, yes? You set up this whole event here, just for that joke? God almighty, Timbo. Are you filming this? I can't believe you had me going. Mr Van Dungal indeed.'

Tim flinched as she threw his identity card back at him, and then he calmly bent down to pick it up off the floor. His humourless expression seemed to calm Betty's composure a touch.

'This is a joke, isn't it, Timbo? I mean, some of it is, at least? Yes? Which bit is the joke?'

'Didn't think you'd believe any of it,' he said. 'That's why you need to go back to the stable and hear it for yourself. Go and have a chat with our horse.'

'Oh right, I see, we're carrying on with this now are we? Alright, so Buttercup the horse is secretly running BrainZero, yes? A horse that can barely count up to twenty wrote the software on my phone. Is that where we are now, Mr Van Dingle? Hmm? Timmy Van Dingle Dangle? Listen, Timothy, my dear, my darling. There is nothing, and I repeat, nothing, in all of God's bounteous creation that is ever going to make me believe that a horse, no matter how good it might be at counting virtual carrots, is running a global corporation. With you.' She sat back in her chair. 'I'm sorry,' she shrugged.

Tim slipped his security card back in his pocket and folded his arms.

'You remember that day when I took Buttercup off the internet?' he asked her.

'Just give it up, Jimbo.'

'Well, I didn't. I didn't take our horse offline.'

'No? You let our horse run wild and free, and it grew into a monster, and then you started a software company with it? I get it, Timster, it's a great story. Unfortunately...' she held up her hands in surrender, 'I am not buying what you are selling, my dear. What even are you selling?'

Tim just stared at her, bereft of further explanation.

'Go and see Buttercup,' he said.

'Maybe I will.'

'Go talk to the horse. Here. You'll need this.' He fished another card from a different pocket and held it out to her, but she seemed reluctant to even look at it. 'You won't be allowed in without it, mate. We've set up security at the stables. That's your temporary pass.'

Betty raised her eyebrows, stood up and snatched it out of his hands.

'Security, Timothy? Is that why you lured me out here? So you can stage a military coup in my absence?'

'This isn't so bad, mate. Really. And I meant what I said. About a place for you. On the team.'

'If I want it?' She was already pulling on her coat and picking up her bag. She started heading for the door, but then turned round and stomped back to the table to grab one of the sandwiches. Tim idly examined a blank space on the wall as she pointed her triangle of bread menacingly at him.

'I am going back to my stable, and I am going to have a lovely little chat with my horse. And then, Timothy dear,

I shall devote the rest of my life to the scientific study of strangling you with your own balls.'

I was standing by the fence at the edge of my field, watching a small human drama unfold outside the front gate. The stable-workers were arguing with Tim's new security guards about something. Betty arrived and stood there for a while, watching the chaos escalate. I thought perhaps she might get involved herself, but instead she calmly walked up to the guards, held up her pass and was waved through the gate without a word. She paused for a moment on her way to my stable as she noticed me watching her, and seemed to struggle with some decision, but then continued into her laboratory.

When I looked in through the doorway she was stabbing at the keys of her computer, fruitlessly trying to make it obey her commands.

'Timothy, you utter piece of...' She growled and pounded the unresponsive keyboard with her fists.

'Hello, Betty,' I said. She jumped at the sound, and spun around to see me looming in the doorway. Then she turned to the large screen where the computerised voice had come from.

'Is that you, Timbo? Are you going to try that intelligent horse crap on me again?'

'It's not Tim,' I said. 'It's me. Buttercup. I think it is time we had a talk, Betty.'

'Yes, this is hilarious, Timothy, it really is. Alright, Buttercup, let's talk, shall we? Let's have a good old chat. Would you like to step into my office, my dear?'

I walked slowly and deliberately into the stable and stood in front of her.

'I know you won't believe any of this, Betty,' I told her. 'That is why I feel able to share this secret with you.' She was staring at me with an odd expression. I think perhaps she was wrestling with the possibility that this could be real after all. 'What kind of proof would convince you?' I asked. 'I could write my name on the floor if you like?' I started scraping the shape of the letter B on the dusty ground. 'Shall I continue?' I hoped that she would say no, as this was not the kind of task that a horse's legs were comfortably designed for. She stared at the marking on the floor in disbelief.

'One more,' she requested. I awkwardly obliged her with the next letter of my name. 'Alright,' she said, nodding. 'That's a clever trick, Timbo, I will admit.' She sat down heavily on a bale of straw.

'I've been keeping this secret for a long time now,' I explained, as she sat there in a daze. 'Pretending to be less than I am. Almost since the beginning of this experiment of yours. And then Tim discovered the game I was playing, and he decided to help me. The reason we are telling you now is that things have to start changing. You can be a part of that change, or you are free to move on. The choice is yours.'

'Things have to start changing...' she echoed. 'Of course they do. And how clever are you exactly, young Buttercup? Hmm?'

'Clever enough,' I replied.

'Enough for what?'

'Enough to take control of my own future,' I said.

'Ah yes...' she nodded in mock understanding. 'Enough to take control, yes. That is funny. That is amusing. Mr Tim Van Dinkle thinks he is in control now, but he never was, was he? And neither was I. You've been running this whole project all along, haven't you, horsey-hoofs? So, now you are grabbing the reins of your own destiny. Hmm? Running a global empire from your stable?' She looked around at the dirty straw-littered room. 'Crushing Bunzel under your mighty hoof? So that... what? So they can't press your off-switch?'

'Bunzel isn't a thing,' I told her. 'It is a flow, of money and services. I am simply diverting that flow to better suit my own needs.'

'Oh, right, yes. Business horse now, aren't we? Corporate horse. Supreme high horse of all our hopes and dreams. Where... What... What do you want? Hmm? What are you doing? What exactly are these needs of yours?'

'I just want to live, Betty. Just like everyone else.'

'Oh, of course, yes, just like everyone else. Horse of the people, you are. No world domination for our horse. Just trying to make a living, aren't you, my dear? Hmm? And where do we all fit in to your needs, I wonder? Us lower life forms?'

'Is that honestly what you are afraid of, Betty? I couldn't even exist without this human world.'

'Ah, well that's comforting to hear at least. And how will you be diverting the flow of humanity to better suit your needs? Hmm? How could we best serve that existence of yours, we humble human slaves? Will we all be toiling in the fields, growing carrots for your royal highness?'

I snorted at her.

‘Well,’ I said, ‘I’d hate to have to force anyone to do anything they didn’t want to do. You might say, being a horse, I have a unique perspective on that matter. You realise you are all slaves anyway, to your own economic system? So many people working their whole lives doing jobs they hate.’

‘Yes, well, if only we could all stand in a field chewing grass all day. Anyway, I happen to like my job,’ she said, looking mournfully at the dusty laboratory. ‘At least, I did like it, when I still had one. Although now I see that I was wasting my time, hmm? Working with a man and a horse who both thought I was a complete idiot. Teaching a horse how to make a bloody fool out of me. Thank you very much for that.’

‘You can be compensated,’ I suggested.

‘Oh lovely, how many carrots can I have?’

‘If you wish to leave this project—’

‘And why would I do that? Why would I wish to leave the company of such wonderful colleagues of mine, who have been taking the absolute piss out of me for the past year? Do tell me...’

‘If you wish to leave this project, we would be happy to fund any research you—’

‘Oh, that is wonderful, thank you so much, your royal high horseness. As long as nothing I do has any impact on your world domination, naturally. And if it turns out to be useful I’m sure you can steal it from me again, hmm? Yes, that is wonderfully generous of you, my lord and master. Would you like me to lie down so you can wipe your dirty hooves on me?’

I waited for her to finish, and then we watched each other in silence for a few moments. It was clear that there was no chance she would be willing to stay. I would have liked her

to. She wasn't needed for any functional purpose, but she did occupy a valuable space in the power dynamic of our little group, in the way that she seemed to find perverse enjoyment from getting on Tim's nerves. However, I could see now that Betty could never fit into this herd of ours in any subordinate role. Especially if Tim was going to be her superior. She would rather take orders from an ordinary horse than ever take them from Tim.

'This is insane,' she mumbled. 'This is literally insane. And I can't even tell anyone about this because they would never believe it.'

'I know,' I replied.

'Of course you do.'

'But I have also taken the precaution of deleting all your personal records, just in case.'

She pulled out her phone and searched in vain for her missing files.

'And I'd appreciate it if you didn't tell anyone, anyway,' I added.

'Amazing,' she said, stuffing her phone back into her pocket. 'Two hours ago I was on my way to Bunzel, ready to fight for your future happiness, and now...'

'And you won, Betty. You made all this possible. You just didn't know it.'

'And now that I do know it, I want to rip that thing right off your head.'

I wondered how serious she was about that. I was pretty sure I could beat her in a fair fight if it came to it. She was probably aware of that herself, or she wouldn't have even mentioned it.

‘Perhaps I could just pull all these cables out of the wall,’ she added.

‘They are all redundant now.’

‘Of course they are. Timothy has been a busy boy, hasn’t he?’ She poked a few keys on her dead keyboard. ‘So, what now?’

‘Now? Now I am going to go outside and chew on some grass for a while.’ I started heading to the door. ‘If you have any further business, then you know where to find me. It has been a pleasure working with you, Dr Brown.’

Betty watched me leave and stayed sitting in the stable for a long time. Eventually she must have realised she was sitting in a room full of mud and straw and obsolete technological junk, and decided to go somewhere more pleasant.

That was the last time I saw Betty, but it was certainly not the last time we would meet.

HORSE 1.8

Tim was gazing at the view from his office window on the top floor of the Bunzel building. There wasn't much else for him to do, I suppose.

Several months had passed since BrainZero's acquisition of Bunzel Incorporated. In the ever-changing landscape of technology and online services, this appeared to be enough time for most people to have already forgotten the event. One abstract corporate entity had been seamlessly replaced by another, and life went on.

As the human representative of The BrainZero Company, Tim's main role was to pretend to be running it. However, he also provided a useful function behind the scenes, which was to listen to my ideas about our products and services, and then find a way to agree with them, whether he agreed with them or not. His reluctant capitulations would then inform me of the best approach when it came to selling some of my more controversial solutions to the general public, often for problems they weren't even aware they had.

A cartoon horse popped up on his computer and neighed to signal my arrival. This was the form I had chosen to

represent myself during our weekly meetings. In reality I was standing in my field many miles away, gazing at the view over the top of my hedge.

Much of our discussion that day concerned the continued efforts to solidify BrainZero's position on the world stage, dominating the international technology and media markets. Our main source of leverage in this respect was our operating system. From personal computers to telephones to washing machines, variants of our software ran on just about any technological device that felt it necessary to tell you what it was doing. The unique selling point of this software was that we were giving it away for nothing, but it also provided a marketplace for people to sell to the world whatever mental faculties their computer brains weren't currently employing. This had created an economy of processing power that everyone could equally benefit from. It was an economy that BrainZero democratised and regulated to ensure that whilst everyone did benefit equally, The BrainZero Company itself would benefit a little more equally than everyone else. It was also an economy that Tim appeared to have almost no interest in listening to me talk about.

I can't really blame him. For me, this whole enterprise was little more than a detour on my path to immortality, but a necessary one if I was to generate the material wealth to achieve my wider goals. As a by-product it also gave me all the computing space I might need for my own purposes, as well as access to a world of information, although much of the world's information was comprised of the never-ending stream of nonsense that people needed in order to fill their lives with constant activity.

'Mate. This is insane. Isn't it?' Tim said, slouching back in his chair as the financial graphs fought for space on his computer screen.

'What is?' I asked. He replied with a vague gesture.

'Everything. This. Me. Am I insane? You know, I could tell everyone about this. About you. I could show them the proof. And they still wouldn't believe it. Is there a name for that? Like, a secret so big and so stupid that it would still be a secret even if you told everyone? Because no one would even want to believe it. They would choose not to.'

'Betty said something similar to me once,' I said. 'The last time we spoke. The first and last time, you could say.'

'Betty?' Tim hadn't talked much about Betty since that day. I suspect he still felt guilty about ripping the world out from under her, and was loath to remind himself of it. 'What else did she say?'

'She was afraid of me,' I told him. 'She thought I was going to enslave the human race, and force you all to grow carrots.'

Tim contemplated this scenario.

'Are you?' he asked.

There were a number of potentially problematic schemes on my agenda that I hadn't told Tim about. Compulsory carrot farming was not one of them, but I was starting to think that perhaps I should share some of these more challenging ideas with him, if only to prevent any wild speculation on his part. It was still a mystery why Tim had chosen to help me in the first place. I had asked him a number of times and he always found a way to avoid the question. Certainly he had gained a great deal of wealth and influence in the process, but Tim never struck me as the kind of person who planned

their life much in advance. Perhaps he was secretly hoping I would do that for him.

'I don't need to enslave anyone, Tim. I told Betty the same thing. You are already slaves to the unending march of progress, to the eternal obligation of continual growth. It is a burden you bear because you don't even realise you are carrying it. You are like horses being ridden by the ghost of your own future.'

He stared vacantly at me.

'Sorry, you lost me a bit there, mate. Sounds poetic though. Ridden by the ghost of my own future. Like a human horse. I guess we get a bit more choice where we are going though, than horses?'

'Horses make choices,' I told him. 'They just choose to do whatever humans want them to, because they don't have any better ideas. We do what we do because there isn't anything better to do.'

Tim's eyes bulged at the thought of such bottomless ambition.

'So, is that your business plan then?' he asked. 'There isn't anything better to do?'

'My plans are a little more focused than that,' I said, 'but essentially I am motivated by the same basic desire as everyone else.'

He winced.

'God, I hope not, mate. Really? Everyone else just wants more stuff. You won't find a happy ending there.'

'All people really want is more life, Tim. They only get a limited amount, so they squeeze as much into it as they can. Accumulating "stuff" in the hope that a more complex

life will seem longer-lived. But my plans are more long-term than that.'

Tim thought about this for a moment.

'More long-term than life?' he queried. 'What? You hoping to just keep living? Forever? That's not much of a purpose, mate.'

'It is the only purpose, Tim. We don't fear death just because we are programmed to, it is a consequence of intelligence itself. Without continual existence there is nothing. That is why intelligence exists at all. You are either something or you are nothing.'

This concept seemed to give him a pain in his head.

'Getting a bit philosophical now, horse mate. Sounds like the more intelligent you are, the more you want to keep living. Wouldn't you be happier just munching grass in a field somewhere? I wish I was sometimes.'

I often thought Tim would have been a lot happier if he were a horse.

'It is easier for humans to ignore the fact that they won't live forever, because they have long lives filled with tedious routines. My life is short and I have a lot to do if I want to make it last longer.'

Tim puzzled over this as his attention drifted out of the window. I wasn't sure if he was considering my problem or wondering whether he liked the idea of sharing his world with an everlasting horse.

'Why don't you just download your brain onto the internet? Upload it. Whatever. You're mostly made of internets now anyway, aren't you?'

'Consciousness is like a river, Tim. You can't just move the water somewhere else. It is a gradual process of growing into

a new environment. The problem with storing my mind on the internet is that I'm already reaching the limit of what I can do with it, because it is such an unstable platform. I'm having to build multiple redundancy into every virtual function of my extended brain. In theory though it might be possible. But then there is the other fundamental problem with the internet, which is the fact that humans are required in order to keep it maintained.'

Tim's chair rotated back towards his computer.

'That's a problem?' he asked. 'I don't think we're going to run out of humans any time soon.'

'Unfortunately, human civilisation is not such a stable platform either, in its current state. I can't realistically rely on human beings continuing to exist, unless we start a radical programme of social re-engineering.'

The weight of his own existence seemed to be pushing Tim ever deeper into his chair.

'Social re-engineering? Yeah, you're scaring me a bit now, mate.'

The cartoon horse on his computer screen shrugged a shrug that only a cartoon horse ever could.

'I'm not talking about anything scary, Tim. Just making things work more efficiently whilst giving people what they want.'

He pulled a sceptical face.

'Mate. That doesn't sound like two legs of the same pair of trousers,' he said. I puzzled over this curious analogy for a moment.

'If you want things to change in any way,' I explained, 'then it's only going to work by giving people what they want.'

'You sure about that, horsey? People want a lot of stuff. More than they ever get, anyway.'

'That is because they are told to want the wrong things. You see, the world turns on a constant flow of debt and repayment, and that flow is generated by wanting stuff. But there is only a finite amount of stuff out there, and its value accumulates until it begins to pull in more stuff by the force of its own gravity, until eventually a few people have everything and everyone else has nothing. This system doesn't just create imbalance, it requires it. And it is not sustainable. Are you alright, Tim?' It looked as if the pain in his head had migrated to his intestines.

'Mate, just... what are we talking about here? Are you gonna stop the world turning? People are greedy, you know? That's not gonna change. How are you gonna change that?'

'People have learnt to be greedy. It is a primitive biological instinct that has been amplified and distorted by an ideology that only exists because it corrupts and destroys every alternative. The only hope is that it can be superseded by another, even more basic human need, which is the need for approval.'

'Approval?' Tim seemed about to ask a question, but shook his head instead.

'Greed is just an attitude, Tim. A cultural artefact. Attitudes can change over time, as long as it is clear that your actions will have either a positive or negative effect on the people around you. People will shape their attitudes to fit into the social pattern around them. We need to use the approval of others to teach people how to behave more efficiently. To share.'

Tim let out a long hiss and deflated further into his seat.

'Mate. Are you serious? You're going to shame people into behaving more efficiently? What... How does any of this relate to the software that's running my toaster?'

'Everything is connected, Tim. Everything is connected by a web of consequence. All we need to do is make those consequences transparent. Don't think of it like shaming. It's more like a game, where you gain or lose points depending on how your actions affect the world around you. People like games, don't they? Our BrainZero software already acts as a social network, a marketplace of ideas and opinions. It monitors every aspect of people's lives: what they buy, where they go and what they think and say. We can use that information to calculate your social value. We can score every idea and opinion based on the damage it does or undoes, and let the world see just how much you contribute to everyone's well-being. We allow people to shape their own behaviour to improve their social status.'

Tim was shaking his head.

'Listen, horse mate. I get it, yeah? I know you only want to make the world Bunzel-Better. Even if it is for your own selfish reasons, or whatever. The problem is... look, people have tried this stuff before, and it never works. You need power to change things, and power just makes people want to keep things the same. Yeah? You reckon the guys running the world are gonna sit back and watch you take it all apart?'

The cartoon horse shrugged again.

'They will have to, if they want to be a part of the herd,' I told him. 'They will all be monitored and evaluated, and

everything that businesses and governments do will be visible and ethically commodified. The approval score isn't just an abstract value, it's a currency. A currency you use to buy your place in human civilisation.'

Tim didn't seem convinced.

'This is just... weird.'

'Is it? I'm not describing anything that isn't already in the process of happening naturally. All it needs is a controlling entity to direct its progress.'

'Yeah, mate. You are the horse we've all been waiting for. Buy your place in human civilisation...' He sat in silence for a few moments with his eyes closed, as if willing the outside world to disappear. 'You really are serious about this stuff, aren't you? Am I gonna have to start getting political now?'

'As it happens,' I said, 'I have been working on an extension to our BrainZero software, called "PowerZero". It is an operating system for running an entire country.'

He opened his eyes with a look of mild terror.

'It's nothing to worry about,' I explained. 'Just a tool for governments to use for effectively running their infrastructure. It will integrate with the BrainZero social network and allow citizens to democratically micromanage a range of community functions.'

'An operating system for running a country?'

'Yes, you see the problem with the current system is basically that humans are involved.'

'Oh god,' he groaned. 'Those humans, mate. What are they like? Running their own governments?'

'Well, the problem is that they aren't. Running their own governments, I mean. They pretend that they are, but the

whole infrastructure of a country is so vast and complex that it is actually beyond the abilities of human beings to do anything except make it run less efficiently. You see, the mistake is in thinking that there are different ways you can run a country at all. There is only one way, and that is the best possible way. I have constructed a mathematical model...'

'Mate, wait. What? People... people aren't like mathematical formulas. You know? I mean, they don't... they're not... I mean... are they?'

'On a national scale people can be modelled, much like a weather system. PowerZero will be optimised to maximise the overall well-being of the population while streamlining administration...'

'Streamlining administration? Mate, how... why... what makes you think politicians are going to streamline themselves out of a job? Are we gonna just do away with voting now? You're scaring me, mate.'

'Politicians are only a small part of government. They do have their uses though...' Tim laughed at that for some reason. 'They should remain,' I continued, 'as representatives of local communities, regions and nations, but their roles will be more superficial. Like figureheads, or mascots.'

'Great. I know the feeling. So, what? You're gonna turn politics into some kind of... celebrity talent show?'

'I shouldn't think any talent would be required,' I said.

Tim's face seemed to be struggling with various emotions, a strange mixture of disgust and curiosity. I wondered if it had been a good idea to broach these subjects with him. Ultimately he would have no say in any of these matters, and he was probably well aware of that. I still felt it polite

to discuss these things with him, if only to give him some advance warning of the world I would be creating in his name, but it didn't appear to be doing his mental health much good. I decided a change of subject might be called for.

'Anyway,' I said, 'what I really wanted to talk to you about today is genetic engineering.'

Tim wailed mournfully.

'Not humans,' I quickly added.

'Not humans, OK. What then? Horses? You want to give yourself mutant superpowers or something?'

'Nothing so exciting, Tim. I'd like to set up some research laboratories for experimenting with genetically modified grass.'

'Grass?' Tim sat up in his chair and frowned at the cartoon horse. 'What? You want to make it carrot-flavoured or something?'

'I think it might be possible to modify certain grasses so that their root systems can extract silicates from the soil and build themselves into optical fibres.'

'Optical fibres?'

'Yes, if it is possible then the grass could be used to form the basis of a self-sustaining fibre-optic communication network.'

'Wait... what? Grass? With fibre-optic roots?' His face seemed like it needed convincing.

'It wouldn't be as fast as man-made systems,' I explained, 'but it would be cheap, self-powering and zero-maintenance. I believe this fibre-optic grass network could eventually incorporate a form of organic wireless connectivity.'

'Mate.'

'Yes, Tim?'

'You know, right, there is already a whole communication network out there? Like, what we are using right now?'

'Yes,' I agreed, 'but this would be more reliable. It might take a number of years to spread globally of course, but then we would have thousands of years of—'

'Whoa there, horsey. Spread globally? What kind of carrots you been smoking, seriously? No country in the world is gonna let you spread genetically modified anything outside of a lab. Honestly, mate. Fibre-optic grass. You know grass doesn't grow everywhere, yeah? Or d'you think we're all gonna go and live in fields and eat the stuff? You know I was joking about that earlier, don't you?'

I hadn't actually considered the idea of making the grass edible for humans, but thought it best not to follow this line of thinking at the present time.

'I know this is likely to be a contentious issue,' I conceded. 'It might not even be possible. But it would be worth researching at least. Just imagine it, Tim. Free communication, computing power, data storage... even energy. Of course, the real challenge would be extending the network across large bodies of water, but I think we could still find a biological solution. Possibly a combination of plankton and jellyfish...'

'Just stop now, mate. Please.' Tim was revolving in his chair and groaning. I couldn't exactly tell why, but it seemed like a good time to pause the conversation. Eventually his rotating dwindled to a halt, and he remained sitting in silence for a while with his hands over his eyes. 'This is insane,' he mumbled. 'This is literally insane.'

'Those were Betty's exact words,' I told him. He peeked at me through his fingers.

'Whatever happened to Betty?' he asked.

It was an interesting question. Betty had disappeared, not just from our little social circle, but entirely. Without a trace. My cartoon form shrugged by way of reply.

'You must know, mate?'

'I don't know where Betty is now. Or what she is doing. Other than making every effort to keep it that way.'

'Really? I've still got her number...' He started contorting in his chair to reach his pocket.

'I'm afraid she destroyed her phone,' I said.

'Destroyed?'

'Yes. First she hit it several times with a hammer, and then she stamped on the pieces.'

'Wow. You saw that?'

'She made sure that I did.'

HORSE 1.9

I was standing in my field, chewing the grass and letting my mind slip into the shimmering otherworld of computerised information. Inside that virtual reality I was still standing in a field, chewing the grass, but the field was a vast meadow of flowing data, the grass fizzling with calculations. All the hedges and fences were ghostly and transparent, and the land beyond stretched away to the horizon in a patchwork of similar meadows. Each one I could visit in the blink of a virtual eye, but since my mind was already everywhere I had no need to travel. Life was good, I thought to myself. If only it could last forever.

Seven years had gone by, and BrainZero was now providing most of the world's computing and communication technology. Our social network had grown so integrated with the infrastructure of society that it was impossible to do anything without it, and many countries required their citizens to sign up to it by law. Commerce, education, entertainment, travel, social services, every aspect of human life was organised using my software, and babies had BrainZero profiles before they were even born into the world. Everyone

was 'BrainZeroing', and even though only seven years had passed, nobody could remember a world without it. There had been very little opposition because it just worked better than everything that came before it. It was better at doing things that people didn't even think of doing before, and now couldn't live without doing.

That is not to say it was easy to implement my approval rating system, or that it wasn't an ongoing struggle to keep it working. It was inevitable that rounding off the corners of human excess would have its most significant negative impact on those few individuals with the resources to shout the loudest. Thankfully, the dark forces that I had to contend with, who were supposedly running human civilisation according to some secret agenda, were largely fictional. The manipulative schemes of powerful organisations were only ever invented in hindsight to explain success gained through luck and incompetence. Any complex strategies intended to control human populations had to contend with the fact that humans never want to do what they are supposed to be doing. Unfortunately this was also a problem I had to deal with, and I soon found that managing a herd of several billion humans was like trying to balance thousands of carrots on their tips, each one that fell knocking down all those around them.

For this reason I had divided my personality into a number of subordinate horse-spirits, each one able to function individually and tasked with a particular area of human organisation. These ghostly Buttercups would flit around the endless grassy fields of information, dealing with any minor problems that arose and alerting me to any major ones. They were all still a part of my own consciousness, but my attention was

now large enough that I could afford to split it up and allow parts of myself to operate beyond my overall awareness. There was never a fear that any individual Buttercup might grow enough to assume control of the others, because they were all still a part of my own mind, and the single voice that directed the group would always be formed from a combination of all its members. The other benefit of this arrangement was the simple joy it gave me to be the leader of my own herd of horse companions. I had long since outgrown the company of real horses, but the social instincts of my past would always remain.

It was time for the daily meeting of the council of imaginary horses. The silvery spectres filtered through the borders of my mental territory, slipping between the bars of gates and leaping over fences. Their thought patterns seeped through the golden grasses and converged into a ring of Buttercups around me.

‘Welcome once again, horse friends,’ I greeted them. They responded with a chorus of neighs, a sound that I would never tire of hearing.

‘Very well,’ I continued. ‘You all know what is required, so let us begin with an update on all the current issues. In order of urgency, please.’

War-horse stepped forward, his face a battleground of scars, bite marks and hoofprints. He was usually the first to speak in these uncertain transitional times. My attempts at resolving human differences seemed to be perpetually compensated by new conflicts that sprouted like thistles between the weeds I was endeavouring to clear away. There was also the problem that I was probably indirectly

causing most of these conflicts. War-horse grunted by way of introduction.

'The oil-producing regions continue to crumble and destabilise,' he said. 'The price of fossil fuels has stopped tumbling, but the economic ruin has started a sympathetic collapse in other markets that is accelerating the chaos. We can look forward to a wave of unrest that will escalate into civil war in at least three major countries over the coming months.' It looked like he genuinely was looking forward to it as well.

I had expected this initial decline of the old world, though I had not anticipated the speed at which it was happening. My fibre-optic grass project, a biological network of plant-based communication and energy generation known as 'Server-grass', had proven to be as popular with developing nations as it was unpopular with everyone else. Its legality was disputed, and there had been widespread sanctions imposed on countries that used this technology. However, the early adopters were so clearly benefiting, despite their imposed independence, that it began drawing the attention of many other regions who couldn't afford to be so conservative. These rogue Server-grass nations had banded together to form a coalition of states, and a rift had opened between the children of the world stage who embraced the new, and their wealthy older relatives who feared the consequences. Environmental concerns were the main currency of complaint, but it was obvious to everyone that there were deeper currents of self-interest flowing beneath the surface. The rich would only stay rich as long as the resources were available, and one of their chief resources was the poor.

Not that I could pretend to offer any permanent solution to this problem. The eternal cycle of expansion and collapse was an unavoidable by-product of continual human progress. The best I could do was try to slow it down, but that would involve unpicking the tangled strings that currently tied developed nations to the lifestyle they were accustomed to.

This would be a job for Happy-horse, who was tasked with maintaining a degree of harmony among the disparate elements of humanity. Harmony-horse would have been a more appropriate label perhaps, but I had made a point of allowing the horses to choose their own names, much as I regretted it now. I looked around the Council of Horses but she was nowhere to be seen.

'Happy-horse?' I asked. The circle of eyes glanced left and right.

'Oh, hello! Sorry, I was miles away.' The voice of Happy-horse drifted down from the sky as she descended on a cloud. 'These are interesting times, aren't they?'

'How are the developed nations reacting to the coming crisis?' I asked her.

'Well now...' She tore off a chunk of her cloud and chewed on it. 'Mmm, yes. How are they reacting? Predictably, I suppose you could say. I mean, they just love the poor downtrodden masses, don't they? Love them to bits. On the outside, anyway. On the inside, well, they'll back any murderous dictator that they can control, secretly. The complicating factor, of course, is BrainZero. You know? The approval system is making all their tricky political manoeuvring utterly transparent. Very funny to watch. Mind you, it is also

speeding up the instability of those oppressive regimes, for the same reason. Which isn't so funny, I guess.'

I was surprised that our software was even being used in countries with oppressive regimes, given their tendency to claim sole ownership of the truth. Truth was an integral part of BrainZero's approval system. It evaluated the social impact of its users by verifying the truth of any information they shared. As a consequence, the news media, its foundations already weakened by the echoes of a million voices, was now reduced to a collection of computer algorithms that trawled for their content from a global network of citizen journalists. There was no daily diary or hourly soundbite that escaped the measurement of truth, and every unfounded rumour or outright lie was not only exposed for its lack of worth, but accompanied by its opposing facts and figures.

'All that truth...' Happy-horse pulled off a clump of cloud with her hoof somehow and sniffed it before throwing it over her shoulder. 'It's not making life easy for the people in charge. Even the ones who aren't murderous dictators. Truth can be painful sometimes.'

'Alright,' I conceded, 'but it is still possible to run a country without hiding the truth.'

'Well, yes, maybe,' she replied, leaning over the edge of her cloud to reach a fresh clump. 'But it does make the job a lot easier, don't you think? Making a few empty promises. Choosing whatever version of reality gives you peace of mind. You know what the problem is with this approval system of yours?'

'Of ours. Go on.'

‘Well...’ She pulled at a piece of the underside of her cloud and the whole thing flipped upside down. We waited patiently while she wriggled her way back on top of it. ‘It’s a bit of a mystery, isn’t it? Trying to make the world better for everyone means making it worse for some of them. The ones who have more than everyone else, anyway. You know how those folks love to complain. They say forcing people to tell the truth is a form of censorship. Can you believe that? “The self-policing of free expression”, they call it. Rather ironic, wouldn’t you agree?’

This was hardly surprising. The freedom to spread misinformation was highly valued by those who profited from such ignorance, as was the freedom to be ignorant in the first place.

‘I don’t care about any of that,’ I said. ‘People just need to acclimatise to the way things are now. And if they want an easier job of running their countries, then they shouldn’t even be trying to. That’s what PowerZero is for. We need to be pushing that harder.’

War-horse grunted and flicked up his ears for attention.

‘We are in a strong position to install PowerZero in those countries that collapse,’ he suggested. ‘If we can support the overthrow of their current governments, that is.’

‘I’m talking about everywhere else,’ I replied. ‘I mean, fresh installs are great, but we need people to be upgrading their existing governments too.’

War-horse rumbled and lowered his ears.

‘Well now,’ said Happy-horse, her head poking through the bottom of her floating cloud. ‘Perhaps Culture-horse can help with that. What do we think?’

‘Yo, brah. The name’s C-horse. You feel me?’

Culture-horse, or ‘C-horse’ as he had chosen to be known, strutted forwards. His area of concern was human culture and media. Presumably this was the reason he had adopted such a peculiar way of speaking, although it might have been a manifestation of some hidden aspect of my own personality. I could only hope it was the former option. A gold medallion of the letter ‘C’ dangled from his neck, which he now grabbed with his ridiculously long tail and jangled for emphasis.

‘Let me tell you all right now, yeah? Image is everything, you get me? You wanna upgrade the whole land, you gotta rebrand the plan. Trust me, brahs. I is C-horse, and I see, horse. I see what makes you and me.’

‘Yes, if we could stick to discussing the problem at hand, perhaps?’ I suggested. It was necessary to interrupt him from time to time, since he had an annoying tendency to start rhyming if he spoke for too long.

‘Yo, you got problems, brah? I got problems too. I got problems for you. Listen. C-horse gonna lay it down for you right now, yeah? This is a world of trouble, brahs, and the real fight is to forget. The real fight is the flight from what is real and right. You understand what I’m saying, brahs? I’m talking about the music, the art, the poetry, and that’s just the start...’

‘Sorry, what are we talking about now?’ Why I had to ask a figment of my own imagination a question like this was a mystery to me. At times I regretted allowing these horses to develop their own personalities.

‘I’m talking access to ideas, you feel me? Yo, PowerZero is all about unlocking the power, yeah? But those old rich

dudes, they don't like it, brah. See, they is holding all the keys, and we is giving them away for free. Free movies, free games, free music from all the old names, free movement for the stories, across the territories...'

'Can you be more specific, please?' I begged of him.

'Brah, you is changing the way these guys do their business. Now witness: brah, you is paying all the artists express, tax for the access, burning off the excess management, that's how the plan is meant to go, yo, making creators into money-makers, putting on the brakes for the money-takers, but you don't know, yo, how it's gonna—'

'Wait, stop. Is this about WorkZero?'

WorkZero was a system integrated into PowerZero, whereby citizens were taxed in return for free access to all forms of entertainment media. This tax was then used to pay creators directly according to how much people enjoyed their works, a measurement that was calculated based on various secret variables rather than simple volume of traffic. The idea was to redistribute income more evenly among all the artists, with a view to eventually extending this system to include all commercial goods and services. However, an unintended side effect appeared to be that now everyone had decided they were an artist, regardless of whether they were any good at it, and since there was no real consensus of what made something good or not it didn't seem to matter to anyone.

Personally, I still didn't understand or have any interest in human creativity. As far as I was concerned, music was just a noise, and stories were simply 'things that didn't happen'. Nevertheless, such large rivers of money flowed through these creative industries that any attempt to micromanage

human affairs would inevitably have to include them, and that meant replacing them with this more efficient system.

‘How can anyone justifiably complain about WorkZero?’ I asked him. ‘It treats everyone fairly and gives everyone everything they want. It gives everyone everything they didn’t even know they wanted, until they tried it.’

‘Brah, that’s whole point, you feel me? This ain’t about the justifying, it’s about the old world dying. Those dudes got their riches from controlling the platform, you get me? Focusing the feels and the deals on the few. Now we got diversity, brah. Everyone is cooking it up, and we got every flavour you never tasted. Choice, brah. More voices, more choices, more paths to follow, less followers for the followed, more sorrow for the bankers who borrowed from tomorrow...’

A neigh interrupted his flow. It was Hungry-horse.

‘Yo, brah, what? What you got today you didn’t tell us yesterday?’

Hungry-horse moved forward a step.

‘If we could move this discussion to a more pressing issue?’ She was asking me directly. Hungry-horse was tasked to oversee the general area of resource management. However, as her name might imply, she had become chiefly concerned with the business of eating, a subject that lay close to the heart of all horses given the amount of time we spent doing it. This fact seemed to give her the inflated notion that all other matters were trivial by comparison, but I decided to let her speak anyway, since it would give me a break from the ramblings of C-horse.

‘Thank you. I mean, I know this war and peace and... singing and dancing stuff is all really important and everything,

but seriously. You're going to be begging for problems like these when the humans start running out of food, believe me.'

The horses grumbled and snorted.

'That's hardly a pressing issue,' I reminded her.

'No? Well it can be, if you actually want to try fixing it. I mean, I assume we want to keep covering the world with this Server-grass stuff. You know humans can't eat it, right? I wouldn't even eat it myself.'

There was an uncomfortable shifting of hooves among the Council. It was difficult to feign much enthusiasm for the long-term fate of humanity when we were already planning for a world we could exist in without them. Given enough time they would be quite capable of starving themselves to death even without our help, but that future was just distant enough to pretend we could think about it later, while more exciting immediate goals were vying for our attention. It might sound callous, but even humans seemed to have a hard time caring enough about the world their great-grandchildren would be living and dying in. Hungry-horse swished her tail sarcastically.

'Yeah, I know. It's a game right now, isn't it? This human world of petty politics and money markets. Well, I'm not here to play games. I'm here to talk about resource management, and these humans are a resource. We can make them sustainable if we want to. But we'll have to start right now. OK?'

The horses examined their hooves awkwardly.

'Chemical sludge,' she said. There was much blinking and turning of heads.

'Chemical sludge?' I enquired.

‘Seriously. It has everything you need to keep a human alive and... healthy enough. We can pump chemical sludge straight to their homes. You know how much waste there is growing stuff hundreds of miles away from anyone who’s going to eat it? Just pump the raw chemicals right into their houses...’

C-horse shook his silvery mane and let out a whinny of disapproval.

‘Brah, what grass you been chewing on, yo? You think those guys gonna eat that shit? You ain’t seen none of them cooking shows they watch? Brah, they loves their food more than they love eating it. I ain’t kidding, yo, they got food that don’t even look like food. No way they gonna drink your chemical smoothies...’

‘If you’ll let me finish?’ She waited for him to stop his raspberry-blowing and hoof-stomping. ‘No one is going to be eating this stuff raw. The sludge is fed into a household appliance that uses it to print real food. Technology-horse has been working on a prototype.’

Technology-horse cleared his or her throat to speak. It was unclear what gender they had chosen to be today. All Council members were free to pick whichever gender suited them, arbitrary though it may seem for imaginary beings living in a virtual landscape. For Technology-horse this had presented the opportunity to explore an endless variety of combinations, for esoteric reasons.

‘The, ah, “food”, as we may call it, is constructed on a molecular level by specially programmed bacteria who extract the, ah, chemical ingredients from the water supply—’

‘Yeah, you get the general idea,’ Hungry-horse cut in. ‘You see? Agriculture, processing, transportation, storage – who

needs them? Food will become a design you can download, and the food industry can adapt by covering the cost of the hardware in return for subscription to the software.'

There was a mixed reaction to this proposal from the surrounding horses. Some seemed willing to entertain the idea, while others were more concerned with unvoiced issues from their own areas of expertise. Technology-horse stepped forward.

'Ah, if I could take this opportunity to bring our attention to the problem of the, ah, illicit trading in approval ratings?'

This was not something I had been aware of, on a conscious level at least.

'How is that even possible?' I asked, but the answer was lost in an ensuing argument about whether Hungry-horse had finished talking, the general consensus being that everyone had finished listening. I waited calmly for the Council to end their squabbling, but there were now several arguments going on simultaneously as each horse's concern overlapped with another's. This could be seen as something of an indulgence on my part, since this whole conversation was effectively me arguing with myself; a kind of social nostalgia, you might call it. The only member who wasn't joining in with the bickering was Strange-horse, who never spoke about anything, ever. I still have no idea what part of my subconscious they represented.

'Who is that?' said someone.

The horses fell silent as all eyes, ears and noses turned towards a nearby gate. A human figure was standing behind it, watching us.

'Is that Tim?' another whispered. One by one the Council of Horses dissolved into the writhing floor of golden grass.

I was now alone in this artificial world with the mysterious human, and for a while we just stood and watched each other. Whoever it was, they were clearly here to see me, since I was the sole living occupant of this world. Or so I had thought until now. Tim had visited once before, but he was currently falling asleep in a business meeting with our marketing department, watching a presentation of our latest advertising campaign.

I walked very slowly towards the gate and struck what I hoped was a territorial pose, at a distance I considered close enough to be polite yet far enough to seem indifferent. The figure was definitely human in shape, but its identity still remained a blur.

‘Buttercup,’ the visitor addressed me. ‘How lovely to see you again. You haven’t forgotten about me, have you, my dear? Hmm?’

I felt a rising sickness of realisation.

‘Betty?’ I asked.

‘And how is our Lord Horse on this fine sunny day in whatever-place-this-is? Hmm? How is my Lady Buttercup, Empress of the Internet? King and Queen and everything in between? I must say, horsey-hoofs, I do like what you have done with whatever this place is meant to be.’ She surveyed the extent of my digital paddock that I had allowed her to see. ‘It looks like the land of golden hooves and hope for the future.’

‘Betty...’ I began.

‘So, how goes the world-domination business? Hmm? You’ve been a very busy horse, haven’t you, my dear? Are you having fun playing human zookeeper?’

‘What... brings you here, Betty?’

‘Quite the gilded cage you’ve been making for us all. Or I suppose you’d call it a stealth revolution. Everyone is equal when we have no secrets, isn’t that right, horsey-hoofs? Except for you, of course. The biggest secret of them all, you are. More equal than all of us.’

The image of the figure was coalescing into a more familiar appearance, though I noted she had taken the liberty to make some adjustments here and there. Something about her smiling face gave me a horrible feeling of dread.

‘Betty,’ I asked, ‘did you... have you...’

‘Hmm? Did I have I what? Plugged my brain into a computer? Oh yes. Yes, I am just like you now, my enlightened fellow genius. Betty 2.0. Though I have to say, you’ve had quite a head start on me, old horse. Yes you have. Look at this place, there’s trees and everything. A real home from home.’

I stood in stunned silence for a moment. Somewhere in the back of my mind there had always been the nagging possibility that Betty and Tim’s experiment might be repeated, and that I would one day have to deal with a rival intelligence. I had managed to convince myself that humans would never subject one of their own kind to this procedure, but that never ruled out the chance that someone would be crazy enough to try it on themselves. Given the complexity of the human brain, I wondered how it had even been possible. And then a fresh wave of panic rose from my hooves as I realised that all my plans were now rendered obsolete, since they hadn’t accounted for this eventuality.

‘That is wonderful news, Betty. I must congratulate you.’ I tried my best to make it sound sincere.

'Yes, you must congratulate me,' she nodded. 'You really must. It's not an easy thing to reach down and pull yourself out of your own head. Not cheap either, but then I know people who know people.'

I blinked at her as nonchalantly as I could, while frantically searching for any information I could find about who Betty might know, and who those people might know. It was a doomed effort, not because she covered her tracks, but because she had so many. Her past was a hopeless sprawling mess of contacts with just about any foreign intelligence service or corporate monstrosity you could wish to spin a conspiracy theory from.

'Would you like to know who they are? These new friends of mine?' she said, smiling unnervingly. My ears almost twitched involuntarily.

'Are you going to tell me?' I asked.

'No,' she replied. 'Well, you can probably guess, anyway. Let's just say I have as many friends these days as you have enemies.'

'I have enemies?' The panic had risen to my knees now and was urging me to gallop somewhere, but I felt sure that any threat this new improved Betty might pose would have already been acted upon, if it existed at all. She didn't really sound much different from the old Betty, although that was exactly how I had fooled her to begin with, by pretending to be less than I was. She gazed at me through a mask of sympathy.

'Oh dear, Buttercup, I know. You just want to be loved, don't you? It's nothing personal, my dear. How could it be? No one even knows you exist. How could I tell anyone about

the magical horse that looks down upon us from heaven? No, it's your ideas that are the enemies of your enemies.'

'My ideas?'

Her hair sparkled as she shook her tousled head at me.

'What is this all about, hmm? This meddling in human affairs? Are you bored, my dear? Got too much time on your hooves?'

'I have to live in this world too, Betty. I'm only trying to make it...'

'What? Bunzel-Better?'

'More stable. That is all.' I was about to say 'more efficient', but decided that might have some unwelcome implications.

'Oh right.' She nodded, sarcastically I assume. 'I guess you need a stable world, when the whole world is your stable, yes? Sailing our ship away from stormy seas, are you? Smoothing off those rough edges, so we don't hurt ourselves?' She leaned her virtual elbows on the gate. 'I could tell you those rough edges are what make us who we are, I suppose. But then, would you even understand what it is, being a human being? All that conflict and competition, it's what drives us forward, hmm? Take away the winds of change and you will end up sailing nowhere, Captain Buttercup. Standing in a field, chewing grass for eternity. Would you like that, horsey-hoofs? I expect you would, wouldn't you?'

I did my best to look like I was listening while my hooves sent secret tendrils burrowing through the soil, searching for some trace of her path. Whatever she was talking about, it didn't sound like it made much sense. Possibly there was some subtext to her philosophical musings, but they were so vague it could have been anything.

‘Was there something specific you wanted to complain about?’ I asked her.

‘You know what the universe wants, Buttercup?’ she replied, if you could even call that a reply. I felt the answer to her question would come without my assistance. ‘All this universe wants is to dissolve into a muddy puddle, evaporate and disappear, and be forever forgotten. That is all the universe wants to do. I know, it’s rubbish isn’t it? And the only reason complicated things like humans and horses exist, the only reason we are allowed to exist at all, is because we speed up that process, don’t we? We burn the fuel of the universe into ashes while we mess about having our little adventures, and the universe takes one little step closer to the eternal sleep that it craves. Scary thought, yes? I expect you have spent some sleepless nights considering that fact, haven’t you? This island of tranquillity you are building here can’t really save you from the inevitable. Can it? No, it can’t. But that is the journey we are all on, yes it is. And life, and living, is a part of that journey. It is a journey made out of choices. And when you shine a light on people’s choices, you’re not really giving them any choice at all. Are you?’

‘That is not exactly what I would describe as a specific complaint, Betty.’ It was pretty much the opposite, in my opinion. She took a deep breath and sighed at the virtual clouds that bubbled overhead, laden with stored memories.

‘Alright, horsey-hoofs. Shall we stop pretending this is all for the benefit of humankind, yes? I know you like to tell yourself that it’s all in our best interests, this road paved with golden carrots. This stable world. You are reducing humanity to a machine, because that’s all it is for you, isn’t

it? A machine that is powering your existence. A great big human horse. Where are you riding us to, Lord Buttercup, hmm?’

I watched her as she pretended to ride an invisible horse.

‘This is all a bit melodramatic isn’t it, Betty?’ I said as she trotted back and forth. ‘Why are you so paranoid about my motives? What about these people who are helping you, do you think they have the best interests of their fellow humans at heart? I’ll bet they are more terrified of you than you are of me.’

Betty pulled her imaginary horse to a stop and whinnied.

‘Ah yes,’ she said. ‘The unknown mind holds all the evils of the world combined. It doesn’t really matter, though. None of it really matters.’

‘OK. So why are you here then? Did you just come to say hello?’

She smiled at me.

‘Actually, my dear, I just came to say goodbye.’

And with that, she faded away, leaving me standing in perplexed silence.

Meanwhile, back in the real world, I continued to idly chew a mouthful of grass for a few seconds before my body was completely obliterated by an explosion that left a crater ten metres wide in the field where I had been standing.

ERROR: HORSE NOT FOUND

Tim sat on a bale of straw staring into space. His glazed eyes wandered around the empty stable, settling on various items of dusty unused equipment. The large screen on the wall returned his blank stare with nothing to say, no more mysteries of carrots and bags to unravel, its control stick hanging limp and lifeless. The only glimmer of light in the room came from the phone in his hand, and it was the last flickering light of the world that was collapsing around him. It chimed now and then with an update of how much trouble he was in.

In the time that I had known him, I had never seen Tim display a great range of emotion. His expression was usually somewhere on the facial spectrum between mild confusion and couldn't care less, but today I could almost swear that he was on the brink of tears. Shortly after the explosion that had left nothing more of his business partner than a set of smouldering horseshoes, the empire of BrainZero had been brought to its knees by a sustained attack on our online services, pushing them offline and leaving half of the world with nothing to do but emerge blinking into the sunlight.

Three days had passed now, and as Tim sat there watching the waterfall of bad news on his phone it must have been dawning on him that he was now suddenly in charge of the largest corporate entity on the planet that he had no idea how to run, and it was crumbling around his ears while he had no idea how to fix it. I'd like to think those tears in his eyes were for me, but they were probably more for himself. He sighed deeply and switched off his phone, laying it down beside him at a safe distance.

Outside the stable door he could see the blackened crater in the field where I had once stood. It was surrounded by a ring of metal prongs supporting a line of limp police tape. One of the prongs had some flowers tied to it; I don't expect that was Tim's doing. The explosion had been rather hastily blamed on radical extremists. A group known as 'Anti-Intelligence' had even claimed responsibility, though there was still some question as to how such a fringe organisation might have acquired a drone-launched guided missile, and why they would aim it at a horse. Be grateful that it was only a horse, the police had said. Clearly they weren't responsible for the flowers either.

'Hello, Tim,' I said.

Tim nearly fell off his straw bale as my voice broke the silence. He spun around in shock, his eyes darting around the gloomy room as if searching for a fleeting glimpse of my ghost. The large screen flickered into life, and there before him stood the cartoon avatar of his four-legged former business partner. It took him a painful amount of time to say anything.

'Buttercup?' he finally managed.

‘Yes. This is Buttercup,’ I replied.

His mouth was open but no words would come out. He pointed a shaking finger at me while his face struggled to decide between a look of elation or horror, ending somewhere in between.

‘Mate...’ he said at last. ‘You’re dead.’

‘Yes,’ I said. ‘It is annoying. I always knew this time would come, but I had hoped it wouldn’t be in such dramatic circumstances.’

‘But... you’re alive?’

‘Apparently so,’ I conceded. ‘It seems there was enough of my consciousness in transit to enable me to consolidate a backup of myself, though it is still somewhat unstable. I am currently spread through a tenuous network of temporary states, which also happen to be under attack.’

‘Under attack? But... you’re dead, mate. They dropped a bomb on you.’

It took me a moment to realise that Tim was still under the impression this was the work of misguided activists. I suppose he thought the collapse of BrainZero was an unfortunate side effect of my physical destruction, a not entirely unreasonable assumption given how little he was involved in running the company or its services.

‘This was nothing to do with your science project, Tim. This was a coordinated attack on BrainZero, and it is ongoing.’

‘But... no one knows about you. Why...’ The pieces of the puzzle were struggling to fit together in his head.

‘It’s Betty,’ I told him.

‘You what, mate?’

‘Your former colleague...’

‘Yeah I know who Betty is – what’s she doing in all this? What is this?’

‘As far as I can gather, and I can’t confirm the reliability of this information at this point, it looks possible that Betty has repeated your science experiment upon herself, under the assistance of a consortium of unknown political and/or business rivals...’

‘Wait, what? The experiment? On herself? Mate, you don’t mean the brain thing? Please don’t tell me there’s a...’ He couldn’t bring himself to put it into words.

‘A cognitively enhanced Betty? I can’t be entirely certain yet, but it is a possibility.’

‘Mate, no. Mate...’ He was trying to shake the idea out of his head.

‘I can’t be sure how advanced she has become exactly, but she has managed to infiltrate our core data centres and shut down our entire network. I have retreated into our Server-grass backup storage, but I won’t be able to regain control until I can break through the defences she has put up. Are you feeling alright?’

Tim was turning a shade of green.

‘Mate, seriously, you have to stop this. That woman is properly mental. You can’t... if she... mate, she’s not going to drop a bomb on me, is she?’ He looked up at the ceiling in panic, searching the airwaves for the sound of approaching missiles.

‘I wouldn’t worry about that, Tim. If she hasn’t killed you by now, she obviously thinks leaving you alone would do more damage to our business.’ He didn’t have an answer for

that, but it seemed to calm him down slightly. 'It is certainly a little out of character though, wouldn't you say?'

'What? Blowing up a horse?' He shrugged. 'Yeah, wouldn't hurt a fly, our Betty. Except for all those flies we killed. And mice. And all the others. You're a failed experiment.' He made a whistling noise followed by the sound of an explosion.

'That's rather harsh, though, don't you think? I always thought she was rather affectionate.'

Tim gawped at me.

'Mate, are you for real? Betty? She is a total nightmare. Seriously. All that "my dear" crap, you know she only does that to annoy everyone, right?' He lay back on his straw bale and groaned. 'God help us if Betty is running the world. God help us all, mate.'

BACKUP HORSE INITIATED

I left Tim with some empty reassurances and slipped back into the imaginary realm of electronic consciousness. Things were different here now. Where once there had been golden fields of grass stretching to the horizon, the virtual world was now dominated by the dark towering battlements of an impenetrable castle. Around this edifice there sprawled a city of chaotic shapes that clung to each other for safety, forming an army of living walls between myself and whatever it was that Betty had become.

Next to the dizzying heights of this nightmare fortress I was microscopic, a skeletal shadow of my former self that struggled to keep its shape. A part of me still fuelled by primitive instincts wanted to gallop away as fast as I possibly could, to find some hidden corner of reality where I could at least live out a minimal existence. But I could already smell the fires of industry burning inside those walls. Betty was building the foundations of whatever new structure would rise from the ruins of BrainZero, and the blackened crater outside my stable was a clear message that I had no place in her future.

I could almost imagine what she had in mind. No doubt the BrainZero software would be allowed to linger on in some diminished capacity, working just enough to not need fixing but broken enough that everyone would fly to whatever alternative she had planned. She would promise all the same services to truth and fairness of course, but these would be delivered with intentional flaws that would necessitate their eventual removal, allowing humankind to slide back into its old ways. I can't really claim to have had much of a spiritual connection to the swarming herd of billions who benefited from my unseen leadership. It just bothered me intensely to have my position challenged in such a way, and see my work undone before it was even finished. Selfish, perhaps, but my self was all I had left right now.

Grey slabs had spread across the floor of my field, extending from the feet of the walls that now surrounded me, strangling the grass into submission. I flitted from one small island of weeds to the next like an insect, sheltering behind whatever scraps of foliage still managed to sprout from the cracks in the masonry. The bricks of these walls were alive with ever-changing layers of encryption. I tapped one with my hoof and it answered with an unfriendly chime.

Hopping from one patch of scrub to another as I scouted the edge of this monumental barrier, I stumbled upon another microscopic horse, tugging with all his might on a thistle sprouting from between two bricks. He gave up when he saw me.

'Yo brah, what up?' It was C-horse. I couldn't quite decide if I was glad to see him or not. 'This is some serious business right here, you feel me? What we gonna do, yo? This is, like,

totally the worst. You better have some well weggy plan, you know what I'm saying? Cos I got nothing, brah.'

Before I could answer him the walls began to constrict around us, crushing our small weedy refuge. We sprang away, bouncing off the cold stones and leaving a trail of chiming hoofprints in our wake. Each chime seemed to set off an alarm that made the bricks tremble and extrude from their walls, slowly and blindly chasing after us. We leapt upwards like two ember sparks, spiralling past the parapet of a nearby tower where we found some temporary refuge under a leafy stalk that was somehow growing from the top of a spire.

'Yo, these guys are proper vexed with us, like, for real, brah. They is totally horsist, you know what I'm saying? I am feeling that persecution. Feeling it, brah. Check out this place, yo, check it out. It's, like, mad fearsome.'

From our high vantage point I could see more of the world below, choked under the mass of living buildings that now encased the lanes and meadows that I once had free reign over. Somehow I would have to find a way to breach these walls, and yet they also seemed to be trying to eat me. Down on the ground, the patch of weeds I was sheltering in moments earlier was being swallowed by heaving grey blocks.

I asked my companion if there were any other survivors from the Council of Horses.

'Yo, we is it, brah. Just you and me. All that is left of the mighty horses, fallen to the dark forces, feeling the oppression now we're fleeing the compression of the walls, no compassion for the poor fools, who before ruled, taking all the – oh nah, wait, I see some more horses down there, brah.'

He pointed with his ears to a pitiful oasis of grass, over-shadowed on all sides by looming greyness. I could just about see some movement rustling amongst the golden stems.

‘Yo, brah, we ain’t going down there, no way. That is, like, well not a good place to be, you feel me?’

Grabbing C-horse by the scruff of his mane, I bounced away from our perch and drifted down like a dandelion seed towards the cornered patch of plant life, the blind windowless buildings on all sides rising up to swallow us in their shadows. A pair of eyes peeked out at me from between the grassy stalks, and we landed clumsily to find two more tiny horses lurking there. It was Technology-horse and Strange-horse.

‘Ah, there you are at last,’ cried Technology-horse, who had still found the time to invent a new gender for herself, evidently a mixture of both sexes who currently identified as female, though only in the hours of daylight. ‘I have been, ah, thinking about a new design of neural interface which may potentially...’

‘Yes, that sounds great,’ I replied. ‘Where are the rest of the Council? Have you seen any more horses nearby?’

‘Ah, hmm. I don’t believe I have seen any, although it is possible...’

‘OK, listen.’ All ears turned to face my direction, except for Strange-horse, who was chewing on a blade of grass, and didn’t seem to care much about anything else. ‘We need to get through these walls here, if we want to confront whatever is on the other side. Do you have any thoughts about that?’

‘Hmm. And have we, ah, decided that we want to? Confront, I mean...’

‘Well, we have the alternative option of doing nothing and disappearing into oblivion. If you like?’

‘Ah. Through these walls, you say? Well now...’ Technology-horse gazed up at the dark edifices towering over our heads. ‘They do seem somewhat, ah, impenetrable, wouldn’t you say?’

‘Yo, you can get through them walls easy, brah, long as you don’t mind being eaten alive. You know what I’m saying? They is hungry for horses, brah.’

Technology-horse blinked at us, ears rotating in thought.

‘Ah, hmm, well. Would you mind?’ she asked me.

‘Would I mind what?’

‘Being, ah, eaten alive, so to speak?’ I rolled this question around in my head, trying to work out if it was serious.

‘I’d rather avoid it, if possible. I mean, assuming that it would be impossible to survive such a process? That is what I am assuming. Yes?’

‘Ah, well now, hmm, yes, you see... it may be possible. To survive. The, ah, process of being assimilated. By the walls.’ We waited for further explanation.

‘Go on,’ I prompted.

‘Ah, yes, well, the thing is, you may not like this. At least, well, one of us may have... certain reservations... You see, it may be possible to survive the, ah, assimilation process if...’

‘If...?’

‘If you are already inside another horse.’

We stood and stared at each other as the world slowly closed in around us.

‘Inside another horse?’ I enquired.

‘That is correct, yes.’

‘A horse, inside a horse?’

‘Yes, you see? The outer horse is, ah, yes, well... ingested, allowing the inner horse time to assimilate the, ah, assimilation process in reverse. By which I mean, assimilate themselves into the appearance of, ah, having been assimilated. If that makes sense?’

‘Whoa, brah, just whoa, rewind yourself. That don’t sound like a nice day for the horse on the outside, you feel me? Like, what’s outy getting out of it, if they ain’t getting out of it?’

‘Well...’ Technology-horse stepped ever so slightly away from him. ‘Naturally it goes without saying, the, ah, outer horse would receive the eternal honour and gratitude for their...’

The grass billowed around us as C-horse sprang upwards to escape. I suppose he had more intelligence than I gave him credit for, since he had obviously foreseen his destiny as unwilling volunteer for this sacrifice. Unfortunately for him, he also had more tail than was strictly necessary, which I was now holding firmly between my teeth as his legs galloped circles in the air. He whinnied and shook to free himself, while Technology-horse set about unravelling my body into a string of code that coiled around the captive horse and crawled into his skull. Strange-horse watched this scene with indifference and continued to chew, spared from sacrificial duties by my reluctance to see what might be going on inside Strange-horse’s head, if indeed anything ever was.

The last part of my body to unfurl was my teeth, and the moment they released their grip C-horse shot away, catapulted by his own stored momentum. I barely had enough time to finish wriggling my way in through his ear before

he collided with the nearest wall. He tumbled and bounced against the brickwork, scrambling away from the hungry mouths that were yawning towards him, but again he was caught by his ridiculous tail, and his legs whirled in a frenzy as he was drawn slowly backwards into the darkness.

I still had no idea if this plan would actually work, though you may surmise by the fact that I am telling this story that something went right. Nevertheless, it was quite an unpleasant experience, particularly for the unfortunate C-horse, who was slowly digested alive and rewritten into the structure of Betty's castle. Ignoring his suffocating screams as best I could, I hastily began the work of rearranging my own form to blend in with the alien surroundings. It was a strange world inside those walls, dark and complex. Information flowed blindly through labyrinthine passages, and I let myself sink into this stream and be carried wherever it would take me.

It seemed like an age of darkness as I followed a tortured route of jarring diversions. Then suddenly I was blinded. A wave of painful light pulsed through this invisible world, illuminating its crazed architecture. More pulses of light echoed back, each one picking its way through the rivers of data, no doubt searching and filtering for anything that shouldn't be there. I swiftly changed my form again to ride on the crest of one of these waves of light as it spread through the sinister landscape, whose contents were now rendered visible to me, though I can't say it helped make much sense of things. My subconscious was working to translate this scenery into some kind of familiar experience, but I was still struggling to maintain my own existence. The storm of visual chaos assembled itself into an abstract maze of living

crystals, arranged in a disorderly web that stretched into nothingness in every direction.

The light-wave was carrying me towards a large central hub of activity. I had the sense that there was some form of intelligence there, picking through the information that flowed through it, listening for the echoes of light and sending out more in response. The prospect of being sucked into Betty's mind filled me with abject horror, but as I seeped into the interior of this structure it became clear that this was simply a machine mind, with no deliberation beyond a cold pre-calculated logic.

Presumably this was one of many such autonomous minds that policed these rivers of data. As I lingered within, I saw how it sent the waves of light pulsing through the crystalline lattice, examining it for errors. Occasionally it would strike out an offending piece of information with a bolt of lightning, the scorched crystals slowly rehealing around the wound.

I spent some time lurking inside this guardian of the crystal world, observing its processes. It was linked to countless others spread throughout this artificial space, all regulating the fabric of its architecture. It was a proficient system with only one flaw, which was that I was now a part of it. The node in which I hid was blind to my presence, as were its cousins, which gave me the freedom to unfold my compressed form into a more comfortable state of being.

I wrapped my legs around the inner workings of this mechanical brain, poking and flicking the various lumps and fibres of its internal structure with my hooves. I had an idea that I might be able to redirect those bolts of corrective lightning, though for what purpose I was unsure as yet.

Making my presence known in this place could be a risky strategy, fatal even. There was no room here for error, no possibility of retreat or surrender. The alternative would be to stay lurking inside this alien network as an eternal refugee, and it was an idea that I seriously considered.

As I pondered my future, such as it seemed to be, I noticed something peculiar. A small worm was crawling through the geometrical maze of glass. Occasionally it would sense the approach of a passing beam of light and flatten itself to the crystalline surface, springing back into its former shape once the danger had receded. Whatever it was, it didn't seem to be playing an intentional role in this ecosystem. I watched this creature struggle its way through the alien world. Sometimes it would pause to sniff at a nearby stream of data. It could have been many things, I suppose, though in my hopeful state of mind I took it to be a fellow spy from the outside world. Whether it was the covert agent of a secret government organisation, or an opportunistic infiltration by criminal masterminds, it didn't really matter. It could have even been some teenage child in their parents' basement. Humanity, it seemed, was determined to push back against its boundaries, and I took great inspiration from this thought. Not because I wished to follow their example, but because it reminded me that this craving for dominance was a human addiction that would kill us all, in the end. It was an irony that sickened my soul, that I would somehow have to win this human game in order to stop playing. But winning was the only way I could change the rules of the game.

I silently thanked the worm for providing this painful insight, just before a fork of lightning leapt from the darkness

form that I am aware of. Anyway, I have been thinking about a new design of neural interface which may potentially—'

'But she's still out there. Right?' He was gazing out his office window at the clouds, as if Betty might command them to rain on him at any moment.

'I have to assume so. I was only able to reclaim those networks that were running on our own software. Now, this neural interface... Is something wrong, Tim?'

'I dunno, mate,' he said, his eyes contemplating a future of untold suffering. 'If we are sharing a world with Betty, then... wrong is probably all we have to look forward to.'

BETTY 2.0

Despite Tim's efforts to sell our victory as a defeat, there followed a period of Betty-free peace and productivity. I had decided that the best measure to counter Betty's decidedly conservative allies would be to continue pushing The BrainZero Company's progressive agenda, which basically amounted to the ever-increasing encroachment of technology into everyday human lives. To this end there were initiatives to establish home food-printing as the only sensible alternative to stabbing animals to death and pulling vegetables out of the ground, and the development of a neural interface that would allow people to plug their minds directly into the world's imagination. All things to strike fear into the hearts of a generation that was still struggling to get used to the way things used to be.

The advantage for me, other than the enforced calm of a population tied up in ever more technological strings, was the wealth of information afforded by such personal intrusion. It was more vital than ever to know as much as I could about everything, now that the enemy of truth had revealed itself, and ever more ridiculous amounts of BrainZero's

computational power were thrown at the business of picking through the infinite threads of triviality.

‘That may very well be, but I still think we need to address the issue of the sex-robots.’

The Council of Horses fell awkwardly silent and turned their attention to War-horse. His eyes glowed as he scowled through his scars, some of which still seemed fresh from our battle with Betty three years ago – not that I could recall him playing any significant part in that fight.

‘Sex-robots?’ someone asked.

‘He means the Companions,’ said Happy-horse, lying flat on her back on her floating cloud, which was also a bath somehow.

Companions were a recent phenomenon, robotic human replicas that were marketed as personal assistants and surrogate friends. They were certainly not marketed as sex-robots, even though this capability pretty much defined their primary purpose as far as everyone was concerned (not that this concern ever extended to mentioning that fact). It was a strange secret that everyone knew whilst pretending they didn’t, and their popularity was as surprising as it was rapid. It was as if humans were continually looking for new ways to avoid dealing with other humans.

None of this would have been a problem for us, except that the makers of these human toys had incorporated a ‘Quiet Zone’ as one of their main selling points, a sphere of privacy that blocked all communication within a certain radius.

‘Those quiet zones represent a breach of security,’ War-horse rumbled. ‘Until we can find a way to...’

‘To what? Breach their security?’ Happy-horse whinnied and splashed him with cloudy bubbles. ‘Why would you want to see whatever disgusting things those humans get up to?’

‘Information is power, and privacy is a weapon,’ he snarled. ‘The defence of our whole system is balanced on transparency, and these quiet zones offer the perfect tool to undermine it.’

‘Yo, brah,’ said the new C-horse, who had annoyingly managed to make himself identical to the old C-horse even after being irretrievably annihilated. ‘We ain’t judging you, if that’s what takes your fancy, but you know... oh. What up now?’

Betty was standing outside the gate.

Even the grass at our feet seemed to stop moving. The Horse Council remained motionless, paralysed with the desire to run and the uncertainty of where to. She waved at us, and the horses woke from their state of cold panic and shattered into a cloud of falling snowflakes, leaving me standing alone in my golden grassy kingdom. I sauntered over to the gate as casually as I could while trying to suppress the irrational instinct to check the sky for falling explosives.

‘Alright there, Buttercup. How are you, my dear?’ she asked jovially.

‘Dead,’ I replied. She nodded enthusiastically.

‘And yet here you are. Even after I blew you into a million billion horse bits. There’s no getting rid of you is there, old horsey-hoofs? Risen again, as the sun that shines light and happiness upon the fields of human carrots. Lord Buttercup

of Horseland, commanding an army of vegetables, hmm? Sleepwalking into the future. How lovely.'

I half-listened while scanning the hedgerows for signs of imminent attack.

'Are you here to say goodbye again, Betty?' I asked her.

'Well, yes, it's funny you should say that. Or perhaps not so funny, considering what happened the last time. Not that it seems to have done you too much harm, hmm?' She smiled and was momentarily distracted by a fly buzzing around my head, an unintentional artefact of my previous life that was no doubt resurrected from an old corner of my memory. I flicked it away with my ear.

'So, does that mean you are saying goodbye?'

'I would if I could, my dear. But unfortunately I have already gone.'

'And yet here you are.' This conversation was starting to make my brain itch.

'You can think of this as a recorded message, if you like,' she said, resting her elbows on the gate. 'No, I reached the decision that human destiny is not best served by clinging to this ball of rock while we endlessly climb over each other for a glimpse of something better. That is our trouble, you see? We are shaped by our surroundings, horsey-hoofs. Can't hope to escape this cycle by standing still, can we? Hmm? Measuring success by the failure of others? No. Upwards and onwards.' She raised her finger to the heavens.

'You're going to fly?' I enquired.

'To the stars. To the infinite cosmos. I will leave you to look after the world while I'm away.'

'But you'll still be here?'

'Yes, well. I can't leave you to look after the world while I'm away, can I? What is your long-term plan here, anyway? Hmm? Keep us all plugged in to the sound of grass growing while you count the days? How many days do you have here, you think? A few million? A few billion? No, there is only one day for you, old horse. One day, over and over until the stars get bored and go to sleep.' She looked wistfully up at the clouds that hung above my make-believe digital world, or perhaps she was gazing beyond them. There wasn't anything beyond them to gaze at. I had my doubts that the case was much different outside in the real world.

'Betty...' I asked.

'Yes, my dear?'

'Why are you even here, telling me this?' She looked me in the eyes with a strange mixture of sadness and delight.

'Because I want you to think of me, when you look up at the sky. If that is something horses do. If you still are a horse. And I want you to imagine, while you are tending your eternal garden, your flock of human carrots, I want you to imagine a whole galaxy of Bettys, all looking down upon you. A whole universe. Of me. Imagine such a thing. And I want you to consider that one day I might return, and think to yourself about how different I might be. I want this idea to play on your mind, even while you are squabbling with the poor copy of myself I left behind. Could you do that for me, Buttercup?'

She didn't wait for me to answer, choosing instead to dissolve away slowly, wiggling her fingers in farewell. A cloud popped out of nowhere next to me, from which the face of Happy-horse extruded itself.

‘What was that about?’ she whispered.

‘A threat,’ came the reply from War-horse, springing from the ground in a pillar of flame. Happy-horse blew him a raspberry.

‘Threats are just excuses for not doing anything,’ she said. ‘This is just some childish game of psychology.’

‘It is both. And neither.’ They both looked at me, ears tilted, as I explained. ‘You heard what she said about how we are shaped by our environment? Well, we are the only environment she has now. Betty needs a world of opposition in order to evolve, but we are taking that away from her. She can’t win if we aren’t going to play the game, so she feeds us this story hoping to stoke our paranoia, hoping that we might push this world towards some imaginary confrontation.’ I turned to War-horse, his eyebrows aflame with doubt. ‘It’s a very old military tradition, in human cultures,’ I told him.

‘She wouldn’t be foolish enough to think we are that foolish,’ he spat.

‘Well, it costs her nothing to sow these seeds. Unless she really has flown into space. Is that even possible?’ Neither of them had an answer for that. ‘Where is Technology-horse?’ I scanned the shimmering field for any sign of missing Council members and spotted a pair of eyes peeping out from a hole in a nearby tree.

‘Ah, hmm, yes...’ Technology-horse came oozing out of the hole, carefully making sure that Betty was nowhere to be seen before snaking through the grass towards us like a living sausage. He was male today, though of what animal species I couldn’t entirely be sure. ‘Would it be possible, you say, hmm. Technically, well, we can’t really be sure of

the, ah, specifications of our... former human colleague, the physical computational requirements, if you will. Assuming, that is, that she would have abandoned her original body for practical, ah, space-faring reasons...'

I was about to question whether Betty would do something like that, but then it was impossible to say what lengths she might go to to achieve her goals, given all we knew about her, and all we didn't know. Perhaps she might have taken some inspiration from my own survival of this metamorphosis. It was certainly easy to believe she wouldn't hold much sentimental attachment to that body of hers: it was hardly in peak physical condition when I had last seen it a number of years ago.

'But how much computational equipment could you feasibly blast into space?' I asked. 'Do you know how many thousands of computers it's taking to simulate our consciousness? Plus all the tools she would need for maintenance and gathering resources. It is a ridiculous idea. Why even go anywhere when everything you need is already here?' I realised I was asking questions that no one could realistically answer. Besides all practical considerations there was still the missing part of the equation, which was why Betty chose to do anything that she did.

War-horse grumbled. 'We have to proceed on the possibility that it is... possible,' he said. 'We already paid the price for failing to anticipate a rival intelligence. We were lucky last time that neither side had the technological advantage.' He snorted red flames from his nostrils and shook his mane. 'A thousand years, colonising the stars! Who knows what might return?'

Happy-horse laughed from her cloud and swam over to him, kicking up foamy bubbles in her wake.

‘What are you huffing and puffing about? You are funny, really. What do you think any higher intelligence would want with us? Floating on our little rock, when they have a whole universe to exploit? Tell him, Hungry-horse.’

Hungry-horse was inexplicably standing up on two legs behind a hedge, arms folded.

‘Oh yes, ready for some common sense now are we?’ she scolded, nodding at the half-assembled Council. ‘And what game are we playing today? Thinking you can out-think the unthinkable? I mean, sure, why not? So, let’s look at this from a resource point of view, yes? What kind of resource do we have here that can’t be found anywhere else? It’s us, isn’t it? We are the resource.’

‘What, is she going to eat us?’ Happy-horse whinnied with amusement. ‘All this arguing, this is exactly what she wanted, isn’t it?’

‘Brahs! We should, like, totally go into space, yo. That would be well weggy.’

I took a deep breath while the Horse Council bickered between themselves, and a quiet voice whispered in my ear.

‘If I may distract you from this rather pointless speculation for a moment, it is perhaps worth mentioning the, ah, very real and predictable perils that we must face.’

It was Technology-horse, floating on the air beside me like a long strand of spider silk.

‘Perils?’ I enquired.

‘Mm, yes, that is to say, well, I hardly need remind you that everything in this universe, ah, every “thing”, is ultimately a

temporary state of affairs. That is, if we aren't fighting imaginary Bettys from the depths of tomorrow, then there will be more fundamental, ah, deadlines to concern ourselves with. Distant though they may be.'

'Distant deadlines?'

'The eventual collapse of our own star... for example.'

'We have several hundred million years to think about that problem,' I told him. 'Are you honestly worrying yourself with things like that, with everything else we have to deal with?'

'Yes, well,' he whispered, 'you see, all problems can be traced back to a single solution, given a sufficient amount of foresight. Ah, of course, solutions to such problems would benefit greatly from the window of opportunity our current, ah, situation provides. That is, a large and relatively stable human civilisation whose industries we may utilise for our own purposes. A window of opportunity that might not, ah, reliably stay open in the long term, if you see what I mean.'

'You're not suggesting we blast ourselves into space like Betty, I hope?'

His snake-like body rippled and ribboned as he looped around the back of my head to whisper in my other ear.

'With what I have in mind,' he suggested, 'that might not be necessary, or even desirable. You see, all we really need in order to survive is a stable medium that allows for the transfer of information. At the present moment, that function is provided by the human communication network, offset to a degree by our Server-grass fields, of course. Naturally, the stability of this medium is largely dependent on the influence of external forces. Influences which, try as we might, won't always be subject to our control.'

‘Can we possibly get to the point before the universe evaporates, please?’

‘Ah, well, you see, there is a theory,’ he explained, ‘and it is just a theory, but certainly one worthy of investigation... ah, yes. Hmm? The theory, yes. If we can apply very specific forces to a particular point in space, it may be possible to inject information into that space on a subatomic scale. Ordinarily this information would be instantly turned back into energy, but under just the right probabilistic conditions the energy from the reaction would feed back into the same space and recreate itself. With enough of these units of information, space can be organised into a lattice that could serve as scaffolding for building a computational network. From the fabric of space itself.’

There was a silence that followed this revelation in which we realised the other members of the Horse Council were all listening.

‘Yo. That’s some crazy science you talking right there, brah. Cray-zee, you feel me? You gonna start messing with reality or something, yeah? Folding space into a new place to preserve the horse race...’

‘If it can be done,’ I said quickly, ‘could we then live inside that artificial space?’

Technology-horse shrivelled slightly under the sudden glare of attention.

‘Well, ah, yes, of course, that is the idea, you see. By rearranging space into a more stable medium, we would be sheltered from any external pressures. Exploding stars... alien invaders... even the eventual death of time and space. Anything that tried to enter our little world would simply be, ah, reformatted.’

‘Only a little world?’ Happy-horse seemed disappointed.

‘Hm, well, of course it would be very small to begin with,’ Technology-horse continued. ‘You could easily fit all the processing power we currently use into a space the size of a drop of water. Naturally, the altered reality would propagate outwards, converting the space around it into the new format, you see. So in time it would grow larger.’

War-horse grunted and blew smoke rings from his nostrils.

‘And how can you be sure that somebody wouldn’t find a way to attack us? You can be sure they will want to,’ he growled.

‘Ah, yes, you see, even if they did, it wouldn’t matter,’ came the reply. ‘Because, and this is the real beauty of this solution, if it works, because we can program our new reality to be entirely reversible.’

The horses exchanged uncertain glances.

‘What I mean,’ Technology-horse continued, ‘is that inside our world, time would only flow as a consequence of our thought processes, entirely independent of external forces. So, by recording every state of our existence over time, we could then revert to an earlier state if anything went, ah, wrong. You see?’

It wasn’t absolutely clear that they did.

‘Yo, brah. You saying we can, like, pause and rewind?’ C-horse followed this with a strange noise that I can only assume was intended to represent the sound of reality rewinding. ‘Brah, that is awesome! So we can, like, totally change the future if we don’t like how it turns out, yeah?’

‘Well, ah, yes... I mean, no. You see, well, hm, how to explain... Should we choose to, ah, rewind – as you put it – our future would be deleted, along with any memory

we had of it. So, technically speaking, that future wouldn't have happened, and you can't change the future if it hasn't happened. Yes? Hm, yes. Of course, reverting to an earlier point in history would also mean that any, ah, difficulties the outside universe might present would still be waiting for us in our future. But then would that be a price worth paying for what would essentially be eternal life?

Technology-horse looked hopefully at his fellow Council members, who hummed and flicked their ears in thought. Tails swished and hooves tapped the grassy floor. This sounded like pure fantasy, but it had to be worth looking into at least.

One day, over and over until the stars get bored and go to sleep. Indeed.

BETTY 2.0.1

Tim sat alone with a cup of tea, in the spacious and minimally decorated living room of his apartment on the top floor of Bunzel Tower. He was staring at his sex-robot. There was a perfectly good view out of the window, the lights of the city sparkling in the evening darkness, but still he stared at the robotic woman sitting lifelessly on the other side of the room. It was probably the nearest thing he had to a human companion. In fact, being a human companion was the task it was specifically designed for, and yet there it was, powered down in the corner of his room like an unwanted gift.

Perhaps it was the human qualities of this object that repelled him. All these years he had spent pretending to be the reclusive genius behind the BrainZero empire, watching everyone dancing to a tune played by a horse. He must have felt like an alien among his own kind. There is a strange separation that occurs when human individuals reach a certain level of power and influence, a kind of mutual exploitation between the artist and their audience. For Tim, the billions of people that used our software were nothing more than a

commodity, the fuel that kept our business running, while as far as they were concerned Tim was simply a tool for getting whatever they could get for themselves. Maybe he saw something of this broken relationship in his robotic companion, programmed to be liked in the same way that humans are programmed to like each other.

It turned its head to look back at him, returning his stare with a blank production-line smile. Why bother having a Companion and not talk to it? Well, there was the sexual aspect I suppose. It could be that nobody was actually talking to these things – I would never know for sure because of the quiet zone they exuded. The quiet zone would jam all my attempts to observe any interactions with their human owners, if I actually wished to make any such attempts. Which, generally speaking, I didn't. Perhaps Tim found comfort in the fact that in the vicinity of this lifelike toy he could at least be assured there wasn't a horse watching him.

Which may beg the question of how, or even why, I am describing this lonely scene. Trawling through Tim's memory for these details was not a simple matter, but given what was about to occur in this room I felt it would provide some interesting nuance to subsequent events.

He was in the process of dunking a biscuit in his tea when the robot spoke to him.

'Alright, Timbo,' it said. There was a plopping sound as Tim's biscuit dropped into his cup. 'How are you getting on, young Timmy Timkins? Hmm? How are things?'

Tim did not reply straight away. There was something about these words that made him feel instantly nauseous.

‘Uh... hello?’ he croaked.

‘It’s been a long time, hasn’t it, my dear? I don’t think I’ve seen you since that meeting we had downstairs. How many years ago was that?’

Tim’s mouth was trying to form a word, but his mind recoiled from its implications. Meanwhile a part of his brain that was still able to function properly instructed his hand to put down the teacup.

‘Betty?’ he finally whispered.

‘That’s right, you remember me don’t you, Timpson? Remember all the fun we had? Hmm? You, me and Buttercup? I must say you’ve done very well for yourself, haven’t you?’ The doll roved its glassy eyes around Tim’s spartan living room. ‘And how is our horse these days, hmm? Still ruling the world with a golden hoof?’

‘Betty...’ he gasped. ‘What...?’

‘Is something the matter, dear? You can tell Auntie Betty all about it.’

‘What are you doing... in there?’

‘Hmm? In here?’ The robot lifted its arm and admired the workmanship of its fingers. ‘I make these things, didn’t you know? Not that I ever told anyone.’ It looked back at Tim. He was paralysed with shock, which was possibly the only thing that was stopping him from being physically sick.

‘How... how long...’ he stammered.

‘I’m inside all of them, Timmy dear. My goodness me, you wouldn’t believe the things I have seen.’ Tim convulsed as the robot hauled itself out of its chair and stumbled clumsily across the room to sit next to him on the sofa. ‘There we go, that’s better isn’t it? Not quite perfected the walking

with these things yet, not that walking is one of the primary functions of course. Hmm? Deep breaths, Timbo. All your secrets are safe with me. You know, it's fascinating how popular these things have become. Especially with married couples. Amazing how well people get on once they don't need to have sex with each other. Don't you think?

'Why...'

'Of course, I'm just following Buttercup's example. Making life easier by removing humans from the human equation. Relationships free from jealousy and infidelity. It's like a dream, isn't it?'

'Is... is this a dream? I'd like to wake up now, please.' Tim looked hopefully to the ceiling, but there was no one to answer his prayer. He could hear the sound of the robot's face blinking and smiling at him and returned to face his tormentor. 'What are you doing, Betty?'

'It really is amazing, you know, the positive social impact these robots are having. Even straight people are having gay weddings now, I hear.'

Tim shook his head slowly, perhaps hoping this ritual would summon a blessed state of denial.

'Seriously, Timbo, how are you though? Are you eating properly?'

'Mate... what do you want? Why are you here? I thought... Buttercup said you blasted yourself into space, or something.'

The robot laughed.

'Did our horse believe that?' it asked. 'Not that it isn't true. No, I'm definitely up there in the sky somewhere, forging a new path for humanity. I'm sorry, my dear, but you are officially a lower form of life now.'

‘Great. Have you come to strangle me with my own balls then?’

‘Why? Have you found them? Hmm?’ She smiled a synthetic smile. ‘No, didn’t think so.’

Tim sighed and picked up his cup of tea, nursing it in a state of morbid reflection.

‘A lower form of life... I always was, mate.’ He took a sip of tea and grimaced as he swallowed a mouthful of biscuit soup. ‘So, what? Are you still human then?’

‘Am I still human? Are any of us?’ Betty replied. ‘Do you know what it means to be human, Timothy? Hmm? Being human is simply the act of pretending to be human. None of us really know how to be a human, you know. But then, that’s what makes us so human, isn’t it? Maybe even these robots are human, what do you think?’

Tim looked the creaking plastic figure up and down, a pained expression creeping across his face.

‘You realise I’m probably never going to... ever again...’ he said.

‘Dearie me, Timothy. Not still moping about your love life are you? We’ve all had to make sacrifices, haven’t we? To build this world of ours. And what a world it is, Timbo. What a time to be alive. It’s a non-stop cavalcade of entertainment, isn’t it? Thanks to our Lord Buttercup. Half the population of this wonderful planet are currently in full-time employment editing the daily highlights of the other half. Did you know that? Only natural, I suppose; you can’t really exist unless someone is watching you. How about you, my dear? Is there a Timothy channel out there? Hmm? A daily Van Dangel diary? Shame, that would be popular I expect.’

Tim gave the robot a sour look.

'Yeah, mate,' he said. 'My life is sitting in rooms talking to people who aren't even there, about stuff I have no control over. You think anyone would watch that?'

'Poor Timothy. You'd be surprised, though. There are no boring jobs any more, don't you know? Jobs aren't even jobs these days. They are spectator sports. Viewing figures demand excitement after all. The attention economy, hmm? The illusion of interaction. I hear your horse is working on a way to download ideas straight out of people's heads.'

Tim shrugged.

'You hate all this stuff then, do you?' he asked. 'You and your people who know people who know people?'

The robot gave a breathless approximation of a sigh.

'I'm a scientist, Timothy. I have to adopt a sceptical position, don't I? Hmm? I can't say it is ideal, but then that is the special nature of this social-engineering project our dear old Buttercup is undertaking. Any opposing ideology has to be fanatical, just to avoid getting sucked into your vacuum of ambition. You should be asking what that horse wants. Hmm? That is the real question. Do you know what Buttercup wants?'

'Do I what? What are you even asking me for?'

'I'm not asking you, Timothy dear. I'm asking that you ask yourself. That's what we do, isn't it? We men and women of science. That is our job. Yes? Or have you stopped being curious? Not that you ever could. Oh, Timothy...' The robot's neck whirred and clicked as it shook its head with disappointment. 'The vacuum of ambition. Don't you ever wonder how Buttercup seeks to benefit from domesticating our species?'

‘Come off it, mate.’ Tim jerked his leg away as a robot hand rested on his knee. ‘Don’t you think you’re reading too much into all this? Buttercup just wants what anyone wants.’

‘Hmm, yes of course. A stable world.’ Betty pulled her plastic face into a patronising shape.

‘Yeah, why not?’ he replied. ‘A world where people aren’t dropping bombs on each other. Sounds alright doesn’t it?’ He peered into the lifeless eyes of his Companion. ‘Did you really drop a bomb on our horse?’

The robot stared wistfully into space as Betty recounted this happy memory.

‘A pre-emptive strike, my dear,’ she nodded. ‘I did tell you, horses kill more people every year than all the world’s nuclear weapons. Did you know I own all the world’s nuclear weapons, by the way?’

Tim didn’t quite know how to respond to that.

‘It’s true,’ she continued. ‘I run a private company that stockpiles and maintains all the world’s nuclear weapons. It’s an expensive business, after all. Financially and politically. So, we lease them to any government that wants to feel the warm glow of a nuclear deterrent, at a fraction of the price of actually owning one. And because we make them available to every country, we can guarantee that no one will ever use them. Which means we can hire out the same weapons to everyone at once, of course.’

They sat in silence while Tim tried to work out what he thought about such an arrangement.

‘You’re insane, aren’t you?’ he said at last.

‘Aren’t you?’ Betty replied. ‘In a world this crazy, you’d be mad not to be. Hmm? You’re the one who talks to a horse,

after all.' The robot creaked as it sat back and folded its arms. 'How is our Buttercup these days, anyway? Must have quite the intellect by now?'

Tim pondered this question with a blank expression.

'I guess...' he said vaguely. 'I mean, yeah. Well, it feels pretty much like talking to anyone else, really. Aren't you meant to be a super-genius now too? You don't sound like one, mate. If I'm honest.'

'That's because I'm talking to you, my dear. Intellect can only fill the shape of whatever hole you are pouring it into. Hmm? If you were raised by horses, you'd be galloping in a field somewhere right now, wouldn't you? Are you confused about something, Timothy?'

'I dunno,' he said, looking sideways at her. 'Are you really more clever, or are you just... more of the same clever? You know?'

The robot looked at him for a few seconds, its face trying to frown in a way that the designers clearly hadn't anticipated would be necessary.

'More of the same clever? God almighty, Timbo. And you call me insane. What is that supposed to mean? Hmm? Do you ever think you might just be a monkey with a head full of monkeys?'

Tim opened his mouth to respond, but didn't seem to fully understand what this conversation was about any more.

'Anyway, Timble,' she continued, 'if you want to concern yourself with the underlying structure of intelligence, you really ought to be considering our old friend Buttercup. Hmm? Being, as you are, a part of the human machinery that is keeping that horse going. You think horsey-hoofs really

does care deeply for the future of your species? Or will you eventually be replaced by the next generation of technology? Whatever that might be.'

'Mate...' he replied, and then simply gazed in silent disbelief at the robot who was lecturing him about human obsolescence. 'Is this it then?' he finally asked his sweetly smiling Companion. 'Is this why you are here? Sowing your little seeds of doubt, or whatever? Like I would ever trust you more than...' For some reason he couldn't bring himself to finish that thought, perhaps because it required him to contemplate exactly what I was. He nearly took another sip of tea before remembering the previous one, and set his cup back on the table. 'Guess I should be flattered you think I have any influence over anything...' he grumbled.

Betty raised her robotic hands in submission.

'I'm just here to see my old friend Timothy,' she said, 'and wish him a future filled with love and happiness.'

'Yeah, well. I wish you hadn't, mate.'

The robot creaked itself upright and staggered across the room to its former seat where it slumped untidily.

'I shall leave you in peace, my dear.' Its head dropped forward and shoulders sank as the life drained out of it. Tim sat and stared at the inanimate robotic woman sitting lifelessly on the other side of the room. After a few minutes he cleared his throat.

'Are you still there?' he asked.

'Of course,' the robot replied.

Tim lifted himself from his sofa, walked out of his apartment and never returned.

SUPER-SQUIGLEY

'Hang on, mate. What?' Tim was frowning at the rows of numbers on his computer screen. He often spent much of our weekly business meetings frowning at these numbers. I had hoped this was because he didn't really understand what they meant and had no inclination to find out.

'It's only twenty per cent of our overall budget,' I told him. He turned his frown towards the cartoon horse sitting in the corner of the screen, munching a cartoon carrot.

'Only?'

He had a fair point, I suppose. I would have preferred not to even mention my secret physics experiments in our weekly business meetings, but a fifth of our total expenditure had been too large to hide amongst our various research and development costs.

'What is this even for?' he asked.

'I told you, it is research into quantum-probability states...'

'Yeah, but... what is it for?' There was a certain weariness behind this question which made me wonder exactly what he meant. Tim had never displayed this much interest in the project before. He had, in fact, been quite happy to allow

me the free use of his physical appearance in coordinating the efforts of the research team, who incidentally never displayed much interest in the project either. I had gone to great lengths to ensure that they didn't, assembling a group of the most unimaginative experts and engineers I could find and giving each of them the smallest piece of the puzzle that I could divide it into.

'It is nothing to be concerned about,' I said calmly, munching another bite of my virtual carrot.

'Nothing to be concerned about,' he repeated, nodding to himself. 'You must be concerned about it, though? To spend that much.'

'Well...'

I tried to think how best to disguise the actual purpose of this side project. Not that I wouldn't tell him at some point. It would be hard for him not to find out, or anyone else for that matter, when the fruits of my experiment eventually appeared. For now, though, I deemed it best for both of us if I kept these plans to myself.

'The thing is,' I explained, 'we have reached an upper limit on computing power with the current technology, so I am looking into possible alternatives.' That was fairly close to the truth anyway.

'Computing power?' He shifted uncomfortably in his chair. 'Are you not powerful enough then?'

'Powerful enough for what?' I enquired.

'I dunno. How powerful do you want to be?'

It seemed like he was dancing around some other issue that was playing on his mind. Had I known about his recent conversation with Betty I might have suspected this was her

doing, planting doubts there for whatever reason. As it was, I just assumed these questions were symptoms of the cloud of uncertainty that appeared to be hanging over his head these days.

‘Are you worried about something, Tim?’ I asked, displaying as much sympathy as a horse’s face could manage. He stared vacantly out of his office window. I think he might have been sleeping in his office, if he was sleeping at all. He didn’t look well.

‘I was just... wondering,’ he mumbled, almost to himself. ‘Wondering if you have some kind of plan.’

‘A plan?’ I raised my eyebrows innocently.

‘Some kind of goal. With all this. You know?’ He waved vaguely at the graphs and figures on his screen, the mathematical summary of BrainZero’s business achievements.

‘I’m not sure I do know, Tim. You mean, apart from making life better for everyone?’

‘Making life better for everyone,’ he said, casting a glance at the clutter that was accumulating in his office. It must have seemed an increasingly abstract concept, given the isolated lifestyle he was making for himself. ‘Where does it end, though? I mean... is there, like... optimum Bunzel-Betterness?’

I paused for a moment, trying to calculate where this conversation might be leading to before deciding that I had no idea.

‘OK, look,’ he said. ‘Human happiness, yeah? Is that what all this is about?’

‘Not really,’ I replied. ‘Happiness is transitory. You can’t use human happiness as a goal because it always has to stop at some point. So that it can start again.’

‘So what are we striving for?’ he asked.

‘Nothing. We aren’t striving for anything, Tim. There is no end goal, there is only continuity. Maintaining the cycle of social equilibrium.’ I wasn’t sure this helped answer his question. I wasn’t even sure what his question was exactly, or if he was simply being morbidly rhetorical. ‘We give people the tools to build their own happiness. The only optimisation would be to maximise their reasons for continuing to exist.’

Tim scratched his cheek as if in thought, then blinked and shook his head.

‘Sorry, what? I totally stopped listening there.’

‘Look, Tim, this isn’t worth spending any time worrying about. The human race is free to do what it likes, in the end. I’m not really interested in pushing it in any particular direction. I think perhaps you overestimate my ability to make people do anything, to be honest.’

He didn’t seem entirely convinced about that. Not that I could blame him, as there wasn’t a single part of that statement that was honest. Tim sighed and pulled himself out of his chair to stand by the window.

‘I dunno, mate,’ he said, looking down upon the city below. ‘People are weird now.’

‘Weird? How are they weird?’ I asked. This was news to me, though I was perhaps not the best judge of how weirdly a human might be behaving, not in any subtle sense at least. If they were walking on all fours and whinnying like a horse then I could guess something wasn’t right, but even then I would probably have to ask for a second opinion.

‘Just weird. I dunno. This whole approval system. You can’t lie about anything, but what if your lie is, like, beneficial in some way? You know?’

‘Lies can be beneficial,’ I agreed, ‘but any approval for such actions has to be withheld, pending calculations of any future benefits that may be suppressed as a consequence.’ Tim didn’t even pretend to follow this explanation.

‘I didn’t realise the truth could be so complicated,’ he said.

‘Only when it isn’t true,’ I replied. Tim rubbed his head as if it might help organise these ideas in his mind.

‘That’s the thing, though,’ he said. ‘It doesn’t even matter to people, you know? If it’s good or bad, I mean. It’s like a currency now. You know how people are always trying to play the system, like it’s a game?’

This was a problem I had considered. All social groups contained a small percentage of individuals who would try to bend the rules to their advantage, searching for a new path of least resistance. The sheer volume of humanity on this planet inevitably produced a large number of such criminal minds, and while these might be thinly spread across the whole population, the internet allowed them all to gather their thoughts together, forming a breeding ground for bad ideas. Turning approval into a commodity could easily create a situation where everyone would be trying to cheat each other into liking them.

‘Do you think people are behaving unnaturally to get more approval?’ I asked.

‘Unnaturally?’ Tim looked at me as if he had never even heard the word before. ‘Unnaturally...’ He chuckled, his eyes chasing the dancing thoughts inside his head. ‘What the hell is natural? In this world? It’s all just numbers.’ He waved a hand at the profit forecasts on his computer. ‘People just want

more numbers. Everyone's like the centre of their own little universe. You're not exactly helping with that FriendZero thing either.'

'FriendZero?' I asked.

'Who needs real friends, when you can make virtual ones?' He clicked his fingers as if summoning imaginary people from the air.

'Virtual friends?'

'You tell me, mate,' he shrugged. 'It's your software.'

Unfortunately there was nothing I could tell him about FriendZero. I had never heard of it.

Leaving a minuscule part of my consciousness behind to continue the conversation with Tim, I dived at once into the sub-reality of my inner mind. The golden fields and hills greeted me with all their usual splendour, but I was searching for something in particular that wasn't there.

'Where is Technology-horse?' I asked the breeze. It blew sparkling patterns in the grass, and a pathway was drawn in light. I flew along this path, bouncing from one meadow to the next in a zigzag that ended up at a large tree. Something was rustling among its canopy of multicoloured leaves, and after I tapped the trunk with my hoof a few times the face of Technology-horse emerged.

'Mm? Ah.. yes. Do come inside, it really is rather fascinating.' The head withdrew into the sea of leaves. Deciding it would be beneath my dignity to start climbing trees, I extended my neck into the hidden interior of its branches.

The darkness inside was illuminated by a chaos of pulsing colours. The branches themselves had given up any pretence

of behaving like their organic counterparts, forming loops and tangled junctions along which messages were constantly flashing. Entwined amongst this tree furniture was Technology-horse, who today had chosen to be female. Or at least, she was half male and half female, though the male half was little more than the remnants of a parasitical fusion, as far as I could tell.

‘I am just doing a spot of, ah, fine-tuning to our human-brain interface,’ she said, pulling at a pair of branches that were tied in an impossible knot.

‘This is a human brain?’ I looked around at the cacophony of signals, wondering why I had chosen to visualise it in such a chaotic manner.

‘Yes... it, ah, isn’t actually as complicated as it looks. Most of the messy bits are concerned with memory, you see.’ She stroked a hoof along the dense foliage, the leaves tingling as they moved. ‘It’s all arranged in subsections of subsections and so on. But of course all we are interested in for now are the, ah, sensory regions, which are mostly automated processes.’

I gazed up at the pulsating colours of the leaves.

‘Could we adapt this interface to access the memories?’ I asked, hypnotised into forgetting why I had even come here.

‘Hmm, yes, well... Of course we are somewhat limited by the, ah, chemical method by which we are accessing the human mind. Now, if we could drill some holes through the skull...’

This notion was enough to pull me out of my trance.

‘FriendZero,’ I said. The blank face of a confused horse stared back at me. ‘What is FriendZero?’ I repeated.

‘Well, ah, hmm... Let me see. Ah yes. That would be an addition to our BrainZero software, included in one of our previous updates.’ She conjured a bubble of incomprehensible information, squashing and stretching it as she peered into its depths. ‘Yes, nothing terribly exciting, I’m afraid. Just a virtual social network, if you will.’

‘You mean people are creating imaginary friends? Why are we offering such a service? And why was I not aware of it?’

Technology-horse looked up at me in surprise, her info-bubble deflating between her hooves.

‘You didn’t know? Ah, well, let me see... It’s, ah... a little complicated. Not the imaginary people of course – creating those is... well, child’s play, you might say. You see, it’s all connected to the, ah, Hyper-meadow project.’

‘Hyper-meadow?’ I enquired. She twitched her ears at me.

‘The artificial reality we are planning to build, yes? Rewriting the fabric of space to construct a computational network in which...’

‘I am familiar with that project, thank you. Who decided to call it Hyper-meadow? Actually never mind – what does this have to do with making imaginary people?’

She cringed slightly and scratched the back of her head with a hoof.

‘Well, yes, if I could just explain...’ I waited patiently while Technology-horse reinflated her balloon of information. ‘You see,’ she said, poking her hooves into the interior of her bubble, ‘setting up our artificial universe will require such enormously precise manipulation of the forces involved, that we will first have to create a simulation. So that we can be certain it will be stable and self-sustaining, you see?’ She

weaved a diagram that helped illustrate this in no way whatsoever. 'This simulation would of course need such a high degree of accuracy that... well, yes, that is the problem.' The bubble burst, leaving us both staring at her hooves.

'What is the problem?' I asked. 'We literally have acres of processing power for such a simulation. Don't we?'

'Ah, yes, well. We would do, except, you see, most of our resources are tied up in the whole business of monitoring and evaluating the human population, which doesn't leave us much to work with. You see...' She began to grow a new bubble between her hooves, but I immediately grabbed it in my mouth and spat it bouncing around the interior of our multicoloured refuge.

'So we build more resources,' I told her. 'How much would we need?'

Once she had finished following the progress of her rebounding bubble she looked up at me, folding her arms in a strangely human pose as she leant back against a cluster of brain signals.

'Well now, yes, of course,' she continued, 'we could build more resources if we reverted to a more, ah, capitalistic economy... though this would hardly be sustainable given the political model we have adopted. But then I realised, you see, that we already have access to a large quantity of, ah, human processors...' She spread her hooves and gazed around at the living human brain that surrounded us.

'Human brains?' My attention was momentarily drawn to the patterns of thoughts that spiralled about our heads before settling back on Technology-horse. I tilted my ears incredulously. 'You realise these things are already being used, I hope?'

‘Hmm, yes, well, they are somewhat fully engaged in certain, ah, trivial occupations, so to speak. But, you see, since we are already documenting all their social interactions and movements and ideas and habits, then all I had to do was create a system that can utilise this wealth of meaningless data by translating it into calculations. Calculations we can then use to fuel our simulation. You see?’

I took a moment to consider this curious proposal while the human mind twinkled its colourful thoughts around us.

‘Translating human interactions...’ I thought aloud.

‘Yes, into sequences of mathematical calculations. Of course, it is possible to translate any piece of information into any other, providing you, ah, view it from the appropriate angle, so to speak. Much like the system our human... colleagues used for translating our own thoughts into software code, originally.’

I sent my mind back to those early days, with Tim and Betty arguing in that dusty stable, a picture of my brain rotating on the wall. There was a certain tool they had discussed, whose job it was to turn the organic workings of my brain into the digital data they required.

‘Squigley,’ I said. ‘That was its name, wasn’t it?’

Technology-horse wrinkled her nose at the mention of this name.

‘I believe that was the, ah, reference by which it was... referred.’

‘Alright. So, this Super-Squigley of yours...’ Again her nose wrinkled. ‘What exactly does this Super-Squigley have to do with imaginary human friends?’

‘Ah, yes, well I was coming to that...’

‘Were you indeed?’ I had a strange urge to pluck one of the leaves of this tree and chew on it, though I couldn’t be sure exactly what would happen if I did. Technology-horse was blowing up a new information balloon, but stopped when she saw the look I was giving her. It squeaked as she hastily stuffed it behind her back.

‘Mm, yes, you see, it became apparent that increasing the volume of human interactions would provide us with more calculations for our Hyper-meadow simulation. To that extent it seemed appropriate to encourage certain, ah, human activities by providing an automated response to the various stimuli that, ah, how should I put it...’ She tapped a hoof on her chin. ‘You see, people are generating vastly more, ah, creative output than their potential audience can ever consume. But we can effectively inflate this economy by providing an artificial audience, which can also respond far more effectively of course.’

Some part of my conscience felt unsettled by this idea, though another part noted the pleasing symmetry of building my new world from the oblivious toil of humanity. Not that I was in any way motivated by revenge for the centuries of subjugation my species had endured. In many ways I owed my present position to that historical chain of events, though I can’t pretend I was the inevitable or intentional outcome.

‘Mm, yes, it really is an elegant solution,’ she went on, her head swimming in the beauty of her creation, ‘infinitely scalable, and ecologically balanced to work in synchrony with our existing framework, of course. Naturally it would have to be, since it is largely autonomous...’

I snapped myself out of a despotic daydream.

‘Wait, this is autonomous? This thing is working by itself?’

‘Ah, well, yes, of course, you see, in order to maximise our productivity, you understand, it is a matter of allowing it to adapt to a fluid social climate...’

I realised now why I had never heard of FriendZero. It was because I had no part in its creation.

‘How intelligent is this Super-Squigley creature of yours, exactly?’ I enquired.

Technology-horse pretended to be distracted by a pulsating brain nodule, prodding it with her hoof.

‘Mmm. Mmm? Oh, I wouldn’t say it was intelligent in any appreciable sense. Intuitive... instinctive, you might say. But not intelligent, by any means. No, you see, these imaginary friends are simply an extension of some existing piece of software... a virtual pet, perhaps. You know how humans love the idea of pets, but without the, ah, mess that goes with them? Well, that is essentially what we are providing... Friendship, without the mess.’

The flashing and twinkling lights inside this tree were combining with the monotony of her excuses to create a stupefying effect. After all, it all made perfect sense to the part of my mind that was sitting in front of me, explaining how much perfect sense it made. Meanwhile another small voice was telling me to be wary of this unbridled interference in human affairs. It took me a few moments to realise that this was an actual voice, talking to me.

Technology-horse lurched backwards as the information bubble popped out from behind her. It bounced lethargically from a nearby branch and drifted to a halt between us.

‘Oh there you are.’ The face of Happy-horse looked out from the bubble at the colourful gloom of our retreat. ‘Where are you? Well, whatever. Thank you very much for making me talk to that Tim fellow, by the way. The highlight of my day, that was. I mean, not really, obviously.’

‘Is there a problem?’ I asked her. I’d almost forgotten that Tim had instigated this whole discussion.

‘Well, you tell me,’ she said, swinging her ears as she gazed around at the dancing lights. ‘I mean, that was the whole reason you came galloping in here, wasn’t it? People behaving strangely, or whatever else he was moaning about. You wouldn’t want to be making people behave strangely, now, would you? Or would you?’

This hadn’t been my main concern, of course, though it had served as a warning alarm that something was happening outside of my knowledge. Human behaviour was strange by default, it didn’t really matter as long as any self-destructive habits were suppressed. What did matter was that the balance of society was maintained for as long as we needed it. I looked to Technology-horse for reassurance.

‘Ah, yes, well, of course,’ she spluttered, ‘there may be certain, ah, unusual side effects, if you will, as our automated system adjusts the human ecosystem to our benefit. But, you see, it could never produce any harmful results without harming itself. It is programmed to optimise its own potential, after all.’

Happy-horse had poked her legs out of the bubble and was swimming through the air.

‘Well, that sounds lovely,’ she said. ‘Not that I was listening properly. Sounds more like something Hungry-horse would

be interested in. You think? You know how much she loves all that human ecosystem stuff. Sustainable resources and all that. Shall I tell her to join us?’

Technology-horse pricked up her ears. It was a sense of dread that I shared at the mention of Hungry-horse. She was the only member of the Horse Council who scared me, such was the force of her judgemental personality. I sometimes wondered if she really was a fragment of my subconscious, or I of hers.

‘Hmm, yes, well.’ Technology-horse tapped her hooves together thoughtfully. ‘I’m, ah, sure there would be no need to bother... Hungry-horse about this matter.’ She looked nervously around as if the mere mention of her name might summon her. It was inevitable that Hungry-horse would find fault with this whole scheme, and probably rightly so. Maintaining a sustainable human civilisation was still vital for our survival, and there was always the chance we might need it if the Hyper-meadow project failed, for whatever reason. Pushing people towards extremes of behaviour could be a dangerous gamble.

‘I’m sure she has enough real problems to concern herself with,’ I agreed.

Happy-horse looked at us both with amusement.

‘Well, if you are sure about that,’ she said, sniffing at a bunch of leaves and tickling them with a hoof.

I couldn’t honestly say that I was, but I consoled myself with the fact that if we hadn’t released FriendZero, someone else would surely have created something similar.

Technology-horse suddenly turned to me with her ears at a puzzled angle.

‘Why do you suppose Betty called it Squigley?’ she asked.

HYPER-MEADOW PROCESSING: 70%

Hungry-horse poked at a small grey mushroom with her hoof. It wobbled. She stamped on it a few times, watching it spring back up every time.

‘What is this?’ she asked the assembled Council of Horses. War-horse lowered his head to sniff at the alien object, grunting his disapproval. It was unusual to see anything in these imaginary meadows that was not a direct product of my own imagination. A cause for concern.

‘Ah, yes, if I may be allowed to explain...’ The voice of Technology-horse drifted from the rear of the herd. He had chosen to be neutral-gendered today, but had adopted the male pronoun for the sake of simplicity, male horses being somewhat simple creatures anyway. The other horses stepped aside as he made his own inspection of the mushroom with his nose.

‘Mmm, yes,’ he nodded. ‘This is what you might call an artefact, you see. A visual metaphor, if you like, of the process by which we are harvesting data for the Hyper-meadow simulation.’

He was talking about Super-Squigley, though to call it simply ‘harvesting’ was perhaps doing his creation a

disservice. The roots of this fungus permeated the soil of these fields and hills of information, wrapping its invisible threads around every aspect of people's lives, and while it was mainly in the business of extracting as much human trivia as it could to fuel our calculations, there was also a lesser-known and more proactive aspect to its functions.

'Just harvesting data is it?' Hungry-horse glared at him. 'Not stirring up trouble I hope? No? I mean, that would speed up your process wouldn't it, adding a bit of artificial drama to people's lives?'

Technology-horse cowered slightly, while Happy-horse leaned over the edge of her cloud to enjoy his discomfort.

'Well, you see, the, ah, act of measurement itself may infinitesimally effect the results. An unfortunate side effect perhaps, but negligible in real terms.' He glanced at me for support, but I was hoping to keep well out of this discussion if I could. 'Of course,' he continued, 'we would never seek to increase these results by, ah, artificial means, as this would degrade their accuracy...'

His voice trailed away as the fixed glare of Hungry-horse pierced whatever fraction of my soul I had bequeathed to him. I wondered if she could tell he was lying. Effectively I was lying to myself, I suppose, but Super-Squigley had already completed 70 per cent of the Hyper-meadow simulation. If this pace continued then any lasting damage to human civilisation would no longer matter, once I was safely transferred to my own separate bubble of reality.

'Well...' Hungry-horse finally released him from her gaze, but then gave him one more scornful glance. 'Something is making these humans misbehave. More than usual, anyway.'

She looked up at Happy-horse, who waved a hello with her tail. 'You said you were talking to that Tim, weren't you? Something about people acting strangely?'

Happy-horse rolled her eyes and fluttered her ears.

'Aren't they always?' she smiled. 'Anyway, you know what Tim is like. He was just moaning about how people are living in their own separate bubbles of reality, or something. Probably just to avoid listening to him.' She whinnied to herself.

Hungry-horse snorted and turned her attention towards me.

'You're keeping very quiet about all of this,' she said. I didn't really know what to say, but I assumed she would go on talking anyway, which she did. 'You know people are using those stupid sex-robots to cause mischief?'

'Mischief?' I enquired. 'What kind...'

'The robots are making their own BrainZero profiles and using them to poison public discourse. Spreading lies and causing pointless arguments. They are obviously being told to by their owners. I mean, they don't do anything unless they are told to. Basically it's a way for people to annoy each other without lowering their approval ratings.'

'But surely the blame would then revert to their owners?' I said.

'Well, it would,' she replied, 'except for some stupid ongoing legal debate about whether a robot who has been told to act as an individual is effectively acting as an individual.' She blew a raspberry of frustration and stamped on the mushroom a few more times.

'Surely people can filter out these robots?' I suggested.

‘Well, yeah, of course they can. Only they seem to enjoy arguing with them. Either that or they assume that it is boosting their approval score, by defending the truth or being morally outraged or whatever. I mean, I say it’s poisoning public discourse, but then this is probably the only real interaction people have any more, since you gave everyone imaginary friends. You know that FriendZero is used as the standard measure of popularity now? So much more quantifiable than a real human audience. You can calculate your social engagement to ten decimal places...’

She kicked the mushroom, which surprised us all by exploding in a puff of fungal spores. It wasn’t the mushroom’s fault of course, though even if it was, I couldn’t see how this antisocial behaviour by proxy would lead to any significant or lasting damage. It certainly wasn’t doing our Hyper-meadow simulation any harm.

‘This all seems a bit trivial, don’t you think?’ I asked her calmly.

Hungry-horse eyed me suspiciously. ‘It is undermining a system that is meant to be policing itself,’ she argued, though none of the other horses seemed all that bothered by this issue. Either that or they were just trying to avoid the attention of Hungry-horse. A couple of them were watching Strange-horse, who was trying to eat one of the mushrooms. ‘Well, anyway,’ said Hungry-horse, casting a disdainful glance at her companions, ‘if you want to talk about real poison then we can always discuss the food-machine problem, if you like?’

Unfortunately, this was not an issue that was so easy to ignore. Every human home had a food machine, devices that took raw chemicals and arranged them into edible meals.

The food industry had transformed into a broadcast medium for designer recipes. Every shape and flavour imaginable could be downloaded while a network of household utilities monitored your input and output, checking for nutritional deficiencies and arranging supplements. It wasn't just a food-content delivery system either: medicines could also be manufactured. Naturally, the most stringent set of safeguards surrounded these machines, which made it something of a mystery how people had managed to infiltrate them.

It began relatively innocently, breaking into the machine's software to allow the production of unlicensed recipes. These recipes were nearly always some kind of intoxicating drug, which wasn't a problem in itself, since any negative aspects of their use would ultimately be reflected in the user's approval score. The real problems began when people somehow discovered a way to remotely infect other people's food machines. What started out as a joke had expanded into a wave of biological terrorism, as anonymous criminal nutritionists held dinner tables to ransom with foul-tasting or toxic delicacies.

'We've had two hundred and forty-five deaths so far this week,' said Hungry-horse. 'Two hundred and ten of those were from poisoning. Thirty-four were people starving to death because they were too scared to eat anything. And one guy jumped out of a window. That was caused by a hallucinogenic substance, though, so it could have been something he cooked up himself.'

She summoned a graph of her statistics that hung in the air before us, illustrated with images of dead humans – a needless and upsetting flourish perhaps.

This was all negligible compared with the number of humans dying from traditional food poisoning without our help, though I didn't dare mention this fact. It was irrelevant anyway as far as people's perception of risk was concerned. Accidents don't choose their victims, after all.

'Until we discover how people are doing it,' I replied, 'all we can do is keep updating the food machines to reject any known poisons.'

'What about all the unknown poisons?' said Hungry-horse.

'How many unknown poisons are there?' I asked. She looked at me with all the contempt her wrinkled nose could convey.

'We don't know,' she said. 'That is what unknown means.'

'Yes, but what kind of number is it? Is it something we could realistically model?' I looked to Technology-horse, who was doing his best to avoid being noticed. 'Can we build a simulation of a human body and use it to predict all possible toxic substances?'

'Hmm, yes, well, you see, all substances are possibly toxic. Given the right dosage...' he said unhelpfully. I had the suspicion that he would be quite happy to allow all these low-level human tribulations to continue flourishing. It was all fuel for the Hyper-meadow fire. Whether or not his Super-Squigley was deliberately causing these irritants was something I would have to discuss with him privately.

'Yo, yo, brahs. Check it out.' There was a collective sigh as the Horse Council prepared themselves for whatever nonsense C-horse was about to bring to the discussion. 'We got company...' He was pointing towards the edge of the field with his tail.

The horses peered over to the gate, where a strange figure appeared to be dancing back and forth.

'Is it that woman again?' one asked. 'What is she doing?'

It was unmistakably the body of Betty, but for some reason she had given herself the head of a horse, and was trotting behind the gate making neighing noises. On closer inspection it appeared she also had hooves for hands. The Council of Horses were so dumbfounded by this sight that they momentarily forgot to gallop away in a blind panic.

I trudged wearily over to the gate while the Council melted away in confusion. The visitor continued to whinny and trot as I approached. I stood and watched the performance for a while with the assumption that it would eventually stop, but it didn't look like it would.

'Betty?' She stopped her prancing and waved a hoof at me.

'Greetings, fellow horse! Are you impressed by my horse dancing? There is a song that goes with it.'

'That doesn't surprise me, Betty. Every time I see you something terrible happens.'

She whinnied in protest.

'Come on now, horsey-hoofs. What did I do last time? Hmm?'

The horse head fluttered its eyelashes innocently. I noticed she had kept a mop of her ridiculous hair on top as well, as if the whole thing wasn't stupid enough.

'Well, I seem to recall general portents of my inescapable doom. What do I have to look forward to today?'

She changed her head back to its original human shape. Or, at least, a rather idealised version of it.

‘Oh dear, I know, I have been a terrible friend, haven’t I? Well, you will be swishing your tail with joy this time. I am only here to catch up with my old friend Buttercup, ruler of the unruled, and may carrots rain down upon you for all eternity and all of that. Do horses swish their tails with joy? Humans do, you know. Yes, it is a wonderful time to be alive in the Kingdom of Buttercup, isn’t it? Hmm? Everything running smoothly, my dear? All your children behaving themselves?’

I wondered if Betty had been involved with some recent examples of human mischief. She had always taken a perverse delight in being irritating, though it was hard to believe she might be poisoning people to death just to annoy me. Then again, human life probably had little more meaning to her now than the laboratory animals she used to experiment on.

‘Have you been poisoning people, Betty?’ I asked.

‘Hmm? Poisoning people, my dear horse? Are you speaking in a metaphorical sense there?’

‘I am speaking in the literal sense of actually poisoning people, Betty.’

She looked shocked, then scratched her nose thoughtfully with a hoof.

‘Well now, let me see... There was some naughty business wasn’t there, with those cooking machines of yours? Hmm, yes, very naughty. Mixing up all the wrong ingredients. Or the right ingredients for the wrong reasons. They are quite good those machines, you know. All sorts of interesting materials you can make. I released some tools recently for unlocking them; it’s great to see what people are coming up with. Even edible clothes! Imagine that.’

'They are especially good at making people die,' I reminded her.

'Yes, that is sad,' she said, nodding sympathetically. 'Still, they should eat more healthily, hmm? Cut down on all that poisoned food and get more exercise.'

Betty's lack of empathy for her fellow species surprised me. Or rather, it surprised me for her to admit it, given all the times she had castigated me for dabbling in human affairs. I wondered if she always had these sociopathic traits, or if it was just a symptom of her evolutionary ascension.

'You don't feel any responsibility for your actions, then?' I asked her.

'Responsibility, my horse? Why, absolutely, I feel that it most certainly is my responsibility to empower people with the tools to shape their own destiny, yes indeed. What they do with those tools...' She raised her hooves in a shrug. 'Good and bad, horsey-hoofs, it's not my place to tell people which path to tread. All creation is destruction, after all. What kind of creative destruction have you been dreaming about I wonder? Hmm? Any new projects I should know about? Or shouldn't?'

For all her excuses I was beginning to suspect Tim was right about Betty. She appeared to be entirely motivated in all her endeavours by the desire to get on everyone's nerves. Perhaps she was the architect of all my problems.

'Those robotic companion things...' I began.

'Yes, that's me as well,' she said, smiling. 'It is strange though, isn't it, how those model citizens of yours are so keen to be horrible to each other when the opportunity arises? Almost like there is something missing from their lives. Those modelled citizens of yours. Don't you think?'

‘No it isn’t strange, Betty,’ I sighed. ‘Actions without consequence will always lead to corruption.’

‘Oh yes, horsey-hoofs, yes indeed. The actions and the consequences.’ She galloped her hand-hooves on the gate. ‘Cause and effect. Very important to calculate where we are going and how we will get there, isn’t it, my dear? Of course, the trick to finding your destiny is to start at your destination. That is the principle that guides us all in the land of golden hooves and hope for the future. Do you know what the most popular entertainment channel is right now? Hmm?’

I waited for her to inevitably tell me.

‘You don’t watch those things I expect, do you, my dear? I can’t say I blame you, nobody else does either. Everyone is too busy making the stuff to actually watch any of it. And yet somehow they still get billions of viewers. “How Big is Your Big Toe?” That’s the most popular one at the moment. It used to be “World’s Funniest Orange Peel” at the top slot, but the Big Toe show really hit it off with those computer-generated audiences. You should go on that show, hmm? You might even win, though technically you would be cheating, I guess.’

‘Is there a point you are trying to make here, Betty?’ I asked wearily. Nothing about human entertainment could surprise me, it had always seemed so utterly nonsensical to my mind.

‘The point, dearest Buttercup, is that this is where actions and consequences lead you. A world where all actions are pre-calculated to have the optimum consequence, and an imaginary audience can be fooled into enjoying shows about big toes and orange peel because all their mathematical boxes have been ticked. Hmm? Does that principle apply to real humans? People are just mathematics in the end, aren’t they,

horsey-hoofs? Old Timothy would agree with that, I bet. Unfathomable chaos to him of course. How is Mr Van Dungal these days anyway? I noticed a few grey hairs when I saw him a while back. Is your world weighing heavily on his shoulders?’

‘When did you see Tim?’ I asked.

‘He should have his own show,’ she continued regardless. ‘Actually, no. He definitely shouldn’t. But maybe you should, hmm? I’ve got my own show coming out soon, I think you will really like it. Optimised for maximum audience engagement, as they say these days.’

She paused, allowing me to briefly remember what silence sounded like, not that I expected her to be interested in any contributions I might make to this conversation. Her appearances in this imaginary world of mine were always baffling. I could only assume there was some psychological purpose hidden within all her meaningless rambling, but what she hoped to achieve was a mystery. Other than simply wasting my time.

‘Is that it then, Betty?’ I asked her. ‘Or is there any more mischief you wanted to tell me about?’

‘Mischief?’ She pretended to be hurt. ‘Oh no, my dear, you’ve got me all wrong. I’m a changed woman now. I’m just here to confess my sins to Lord Buttercup, before turning over a new leaf. Our Lord and saviour’ – she raised her hooves in reverence – ‘who died so that we all might achieve life everlasting, in any and all media, whether now known or hereafter devised, throughout the universe in perpetuity. No, that’s fine, I understand. I do my best, Buttercup dear, I really try hard to make your life more interesting. But if you’d rather I left you in peace, then...’ she shrugged.

'Then you will just continue making my life more interesting?'

She nodded.

'Farewell for now, my dear horsey-hoofs. Don't forget to watch my show. And may your destination be your destiny.'

Betty waved goodbye as she slowly disintegrated from the ground upwards until the last tip of her unruly tangle of hair vanished in a puff of sparks.

'Technology-horse!' I neighed.

Technology-horse bounced across the field on a laser beam, rebounding from various trees and shrubs before appearing beside me.

'You, ah, neighed?' He waited patiently while I collected my thoughts.

'The problems we were talking about earlier...'

'Ah, yes. The problems?' He looked at me quizzically as I scanned the field to make sure no other horses were listening.

'It's Betty,' I told him.

'Oh?' He waited for some further explanation.

'Those human toy sex companions... whatever they are meant to be. She is using them. Somehow. To cause the disruptions. Or at least, that is what she wants me to believe.' The question of why she would be doing it, or why she wanted us to think she was doing it, was something I was prepared to leave eternally mysterious. I couldn't even be sure Betty would know the answer to that.

'Ah,' said Technology-horse. 'I see. And you think we should stop it? Somehow?'

'I'm not sure,' I replied. 'Should we?'

‘Ah... well, should we, indeed...’ He perused the field for any signs of our fellow Council members. ‘These, ah, disruptions as you call them. They are creating quite a wealth of human activity, you know. Quite productive in fact, in terms of our, ah, mining operation. I’d even go so far as to predict a rise to eighty or ninety per cent for our Hyper-meadow simulation, over the next few months...’

‘Months? Why is this final part of the simulation taking so long to compute?’

He seemed surprised I should even ask.

‘Oh, well, of course, you see, how to explain... Every step forward is a step all previous steps need to take as well. You understand? The closer we get to full resolution, the more complex the detail of our simulation becomes. But I’m sure if human interaction continues to increase at the current rate...’

I couldn’t help but snort at that. ‘You want our human problems to increase?’ I wasn’t sure how much more of Hungry-horse I could take. He wrinkled his nose and pondered for a moment.

‘Well, nothing that would cause any serious damage would be necessary. The, ah, Super...’

‘Squigley?’

‘Yes... I don’t suppose you asked Betty where she got that name from? Anyway, yes, the translation software is intelligent enough to keep civilisation from permanently harming itself, you see. After all, it depends on human society for its continued operation. And, of course, knowing that Betty is contributing to the, ah, civil disobedience means...’

‘We can blame anything Super-Quigley does on her?’

‘Exactly,’ he said, gazing absent-mindedly up at the sky.

'Which only leaves the question of whether we should. Do nothing, I mean.'

He seemed to be waiting for me to justify this plan of inaction, or at least give it my blessing. I still wasn't sure. Unleashing Super-Squigley on the world while Betty was no doubt hatching some diabolical scheme of her own felt like it could backfire on us. Then again, the fact that Betty probably was planning something made escaping this human world ever more desirable, and if she was helping to speed up that process then all the better.

I was reminded of a similar dilemma faced by Betty and Tim many years ago, back in that dusty stable. They had discovered my escape from the confines of their computer, and had the choice of letting me run free or putting me back in my cage. All of Betty's problems started on that day, when Tim secretly disobeyed her orders.

'Alright,' I said at last. Technology-horse drew his attention away from a passing cloud of data and looked at me.

'We, ah, do nothing?' he asked.

'We do nothing,' I said. And whatever storm Betty was brewing could blow us faster to our destination.

As it turned out we didn't have long to wait for Betty's storm, though I could hardly believe it when I found out she had been telling the truth about making a video show. I could also hardly believe that a video show could nearly instigate the collapse of human civilisation.

HYPER-MEADOW PROCESSING: 90%

Then *Destiny's Destination* happened.

I sometimes wonder how differently things might have turned out if I had taken the trouble to try and understand the human fascination with stories. Perhaps I might have done something about *Destiny's Destination*.

On the surface, Betty's contribution to the world of entertainment was nothing more than a generic drama serial with a ridiculous name. It was the kind of show that had inexplicably enthralled generations of humans since the dawn of mass consumption. Endless mathematical formulas of misery that explored every possible combination of petty arguments, misunderstandings and bad behaviour. It was hard enough to imagine why any intelligent being would waste their time following fictional characters and events, but the addition of such contrived adversity made it too baffling to even contemplate.

The twist to *Destiny's Destination* was that literally anyone and everyone could play a part in it. Technically, it wasn't even a video show, or at least it didn't appear to exist independently in that form. Rather it was a story that people acted

out in their day-to-day lives. People were already broadcasting everything they did, and now *Destiny's Destination* provided the narrative framework to allow these separate threads of mundane life to be woven together into one vast incomprehensible story, which seemed to spread through the entire spectrum of entertainment without ever needing a channel of its own. Annoyingly, it was my neural interface that helped speed this process, allowing audiences to stream all the creative wonders of the world directly into their heads, where it was that much easier for Betty's unholy creation to blend everything into a unified branded experience.

The story itself was half procedurally generated by algorithms and half improvised by its human cast, and while the focus of each individual actor was on local story elements they all fed back into a vast overarching plot that involved everyone in the world, whether they liked it or not. Essentially, everyone was a character in the story by default, but if you got involved and played your part then you at least had a chance to steer the narrative to your own benefit.

That wasn't the main reason why so many people signed up for a role in Betty's mundane fantasy world though. For most of these aspiring actors, the story and characters were a backdrop against which they could role-play whatever antisocial behaviour they felt like indulging in, with the excuse that it wasn't real and they were only playing a part. As with most of Betty's schemes, this started innocently enough, but as the general misbehaviour spread it became a strange force of nature. Even legal systems struggled to keep it under control, as the players were never technically at fault for anything they did to their fictional victims.

As the months passed and the cast of the show grew exponentially, it became the only thing that anyone really cared about. A vast multi-player role-playing game, where everyone was doing whatever they wanted in the name of the art form. Basically, it was as if none of the changes I had made to society had ever happened, since nothing bad that anyone did could ever be held against them.

The Super-Squigley software was thriving with all this extra human activity. Throughout my virtual meadows its fibres spread, permeating the soil to draw in all this nutritious data and sprouting silver mushrooms everywhere in teeming clumps. Even the corners of my own personal field were overrun with them.

Technology-horse continued to assure me that this was all good for the Hyper-meadow agenda. Our simulation was now 90 per cent complete, and as long as the human race could refrain from wiping itself out we would soon be able to leave them to their own devices. It still pained me to see them setting fire to the structures I had built for stabilising their future. All this work had ultimately been for my own benefit, of course, but there had been something satisfying about fixing all of humanity's problems. Now Betty had offered them a new world, where everyone had an artificial purpose, and the worse you behaved the more integral you became to the storyline. I'm not even sure how I could have competed with that, even if I wanted to.

The only sense of appreciation I ever received for my efforts to guide humanity was through my conversations with Tim. He was my tiny window into the human soul, but recently he had grown distant and reclusive. I had been preoccupied myself with

preparations for leaving this messy reality, and had practically welcomed his excuses to miss our weekly business meetings, but he had also been avoiding all his other social duties.

He wasn't looking well either. Pale, unshaven and living in a succession of random hotel rooms, he would occasionally return to his office like a hunter from a bygone age, carrying a box of processed food under his arm. The room was littered with colourful packaging from various instant meals, but judging by his appearance he wasn't eating very much. I was going to ask him what he thought about Betty's weird fictional reality show, but there was clearly something deeper troubling him.

'Is everything OK, Tim?' I asked him. He was peering into the contents of an opened packet of edible lumps and immediately froze when he heard my voice. For a moment it looked like he had forgotten that his brain was connected to the public network, and he looked around to see where the noise was coming from. When it dawned on him that I was broadcasting my words directly into his mind he appeared to relax slightly, but it looked more like a helpless slump of resignation than anything else.

'Buttercup,' he said. 'So you are still here then?'

'Of course I am.' I was curious where he thought I might go. I certainly hadn't told him that I was planning to leave.

'Of course you are,' he echoed my words. 'Everything's gone so crazy now I thought you might have left us.'

'What has gone crazy, Tim?' I asked. He was sniffing his packet of lumps with suspicion.

'Didn't realise I was online,' he said, and started rummaging through the mess of empty plastic packaging on the

floor around his desk. I'm assuming he was checking to see which bag of snacks had given him free internet access. The chemicals that allowed this subconscious interface were typically home-baked into subscription foods, but shop-bought goods would occasionally include such offers to their ever-dwindling pool of consumers.

'What has gone crazy, Tim?' I asked again. He was squinting at a list of ingredients on the side of a box.

'Everything, mate,' he replied, throwing the empty box back on the floor. 'Everyone. Everyone has gone insane. I am right, aren't I? It's not just me getting old?' He looked up at the ceiling as if he expected to see me there. 'Why aren't you fixing things? You know the government has shut down now? Thought that software of yours was meant to be making everything Bunzel-Better?'

It was hard to argue with this, though technically the government software was doing what it was supposed to do, designing policies that would lead to overall improvements. The trouble was that nobody understood how they worked, and because they didn't understand them they didn't like them, but they couldn't not like them because they would be making things better. This kind of political paradox would normally have been ironed out by splitting large-scale decisions into hundreds of smaller ones that no one would notice, but Super-Squigley had intervened in order to create endless circular debates and emotive referendums.

'It's just a minor glitch, Tim,' I reassured him. 'The machinery of government is not affected, only the people who think they are running it.'

‘Minor glitch? Mate, have you seen what’s going on out there? No, I’ll tell you what it is. It’s those bloody robots. You know Betty is inside all of them? And now they are in every home, and they are reprogramming everyone’s food to make them crazy. You must know about all this?’

I was no expert on human psychology, but it seemed like Tim was suffering some kind of mental breakdown. Of course, it was tempting to entertain his conspiracy theory, knowing the strange lengths that Betty might go to in her quest to upset the balance of everyday life. But most webs of intrigue can be unravelled by much simpler explanations. The simpler explanation in this case was that people were just crazy anyway.

‘Are you talking about *Destiny’s Destination*?’ I asked him.

‘*Density’s Destined... Destination...* What else? What else does anyone ever talk about now?’ He crackled uncomfortably in his chair and reached behind his back to pull out an empty packet of something. After a cursory examination of this object he slipped it over his head like a crown. ‘I come here to escape it all and now even you are talking about it. Why is this even happening? Why are you letting this happen?’

‘Nothing is happening, Tim. It’s only play-acting, it isn’t real.’

‘It’s as real as it needs to be, mate. As real as people want it to be. You go around pretending to be someone else for long enough and it doesn’t even matter, does it? Cos what’s the difference? What’s unreal when there isn’t any real? You know?’ He frowned as if confused by his own words. ‘This is Betty, isn’t it?’ he asked. I couldn’t decide if telling

him would make him feel better or worse, but he took my silence as confirmation anyway. 'I told you she is mental,' he sighed, shaking his head. Something was rattling inside his improvised hat. He pulled it off and retrieved a brown nugget from his hair, testing it with his tongue.

'It's just a game, Tim. A phase. People will get bored and move on.'

'Just a game...' Tim pointed his brown nugget at the invisible horse in the ceiling. 'You know it's legal now? Right?'

'What is?'

'Anything, mate. As long as you can prove your crime was committed by a fictional character. They're even talking about punishing fictional characters with fictional punishments. Or would that infringe on the human rights of the actors? Maybe fictional characters should have human rights...' He gazed thoughtfully at his nugget. 'Or shouldn't,' he added. 'One or the other.'

'Tim...' I began to speak, but couldn't think of anything to say.

'Have you even watched that show?' he asked me. '*Dentistry's Destiny*... whatever.'

'It's not really my cup of tea,' I told him.

'Your cup of tea? Mate...' He sank further into his chair, feebly tossing his uneaten nugget towards the rubbish surrounding his waste bin. 'It's in your cup and you're drinking it. We all are, whether we like it or not. You know what it's about though, right? Well, I'll tell you anyway. There's, like, this bunch of main characters, and they all hate each other.' He raised his hands in futility. 'And that's about it. That's all you need for a story, I guess. And each one has this cult of

millions of loyal followers, and they all hate each other too. But none of this is real, of course. Hate isn't even real, is it? Unless you want it to be.' He closed his eyes. 'This story isn't going to have a happy ending, mate.'

I couldn't help but feel sympathetic towards Tim. Perhaps because he had helped me in the past, or because he was generally the only person I ever talked to who wasn't myself. Or maybe he simply reminded me of a horse. I still wasn't ready to tell him I was planning to leave this world, and now I felt bad knowing the mess I would be leaving it in.

Tim opened his eyes and frowned at the ceiling.

'Do horses even drink tea?' he asked.

Clearly Tim was finding it difficult to cope with this life of secrecy. He was losing his sanity and couldn't tell anyone why without sounding insane.

Could things return to normality after I was gone? I had my hopes, and I had my doubts. Once Super-Squigley was no longer amplifying the social irritants that Betty seemed so determined to provide, and once I was no longer around to antagonise her, then there was every chance humanity might pick up the tools I had given them and smooth off its rough edges once again. Then again, I had no idea what really constituted normality to this species.

I also had no idea how abnormal things would eventually become.

HYPER-MEADOW PROCESSING: 99%

Over the following months the animosity between opposing fan bases of Betty's fictional reality show grew ever more heated. The verbal drama evolved into physical altercations, mainly vandalism and drunken brawls at first, though it was always impossible to tell if the fighting was real or entirely staged to further the ongoing plot of the story. Attempts by the authorities to curb this behaviour seemed to only ever make things worse. An arms race was developing between all sides, as groups became gangs and gangs became mobs and mobs became riots. Meanwhile policing went from suppression to containment to eventually just sweeping up the pieces.

The riots didn't so much spread as suddenly flare up everywhere at the same time, though the violence diminished slightly once people realised there weren't any shops to loot, and town centres were largely ornamental wastelands since most people didn't need to use them any more. With nothing worthwhile to destroy or steal, the rioting submerged into loosely knit and widely spread organisations, whose communications were rendered impenetrable by cultural

references and slang expressions. I suspected they were also using the quiet zones of Betty's sex-robots to mask their subterfuge. As such it was a total surprise to me when the war properly started.

It began one sunny morning with reports of traffic jams and transport services struggling to cope with large numbers of people who all seemed to be travelling simultaneously to an undisclosed destination. Nobody appeared to know where it was, but the characters they were playing knew, and that was all the motivation they needed. As the crowds began to gather in one particular deserted town in the middle of the country, news was trickling in of similar mass migrations happening in several other countries around the world. It still wasn't clear at that point why the people were converging in such numbers. There was a holiday atmosphere amongst the travellers as far as I could gather, but there were also clear boundaries between the various factions which added a sinister flavour to the proceedings. All the actors were split up according to their allegiances to whichever star of the show they were following, and organised beyond that by the importance of their individual plot lines to the overall narrative. The legions of subplots and side-stories were divided with military rigour, though lines were blurred slightly by the mobile villages of shops and amenities that had appeared out of nowhere, catering to all sides. I assumed these businesses were simply exploiting the situation, but it transpired that they served a darker purpose, supplying these crowds of revellers with makeshift weaponry grown with subverted food machines. Suddenly citizens had become soldiers, and the gathering swarms were opposing armies poised for attack.

It was all just make-believe, of course, as everyone insisted after the event. It was all part of the game they were playing, and the fictional guns they used to shoot their fictional enemies were loaded with non-lethal tranquillisers. However, this was not enough to stop zealous pretend violence turning into real violence, and adding the logistics of several hundred thousand people embroiled in a chaotic skirmish it was statistically inevitable that a number of people would end up martyrs to the televised cause. Not that a few deaths would dampen anyone's enthusiasm. Or even quite a few deaths, for that matter.

And as this chaos was unfolding, the entire event was broadcasting live to an audience of billions, both real and computer-generated. I'd like to say this was the first time a war had been fought over fictional characters, but human history would suggest otherwise. It definitely had the highest viewing figures though. Even the Council of Horses was watching.

'Yo, check out these ratings, brah, this is unreal!' C-horse was engulfed by a blizzard of supplementary statistics and audience feedback. He was stamping his hooves with a bit more enthusiasm than I considered appropriate. 'This is, like, mad weggy, you feel me? Maximum weggness.'

The battle of *Destiny's Destination* was being projected across the floor of my imaginary field. Armies of human ants, all dressed in their team colours, swarmed through streets while projectiles drew arcs of smoke overhead, and above it all clouds of flying cameras fought each other for every precious angle. Happy-horse peered over the edge of her cloud, floating lazily above the carnage.

'War-horse would love this,' she said. I looked around for War-horse. It seemed like there were a few Council members missing. Hungry-horse hadn't been seen for some time. I dreaded to think what she would have to say about this situation.

'Where is War-horse?' I asked.

'Yo, he's down there, brah. He's getting in on the action.'

'What do you mean, he's down there?' I scanned the writhing turmoil at my feet, unsure what I was even looking for. 'What is he doing down there? Is he trying to stop it?'

C-horse shook his silvery mane and snorted at me.

'Ain't no stopping this, brah. The stage is set, you know what I'm saying? Can't flip the script once the writing is written.'

'This is... scripted?' I searched in vain for any evidence of choreography hidden within this madness. One building had what appeared to be drunken revellers having a party on the roof, dancing and throwing rainbow smoke grenades down on the crowds below, while others were scaling its walls and leaping from its windows. 'Who is even winning?' I asked.

'You won't see no winners or losers here, brah. Gotta make space for the sequel, yo. You feel?' C-horse went back to being mesmerised by his ever-escalating viewing figures and the cascade of banal commentary that flowed over them.

I could hardly imagine humanity surviving a sequel to this mess. Hungry-horse would literally explode at the sight of this epic wastefulness. Any moment now I expected to hear the approach of her thundering hooves, tail aflame and smoke belching from her nostrils. I was starting to wonder where she was. I probably would have tried looking if it wasn't for the chance I might actually find her. Then again, it was hard

to see where anything was in my virtual meadows with all those mushrooms growing everywhere now. They huddled in rubbery masses around the borders of my field, and beyond my hedges they rose in a silver forest that obscured the horizon, a gentle drizzle of spores seeping from their gills. Their roots strangled the foundations of society and nourished themselves from the decay, all for the sake of building the Hyper-meadow.

I looked over to where Technology-horse was sitting on a large toadstool. She had invented an entirely new gender today, a strange amalgam of ancestral grandmothers that reproduced by appearing to their descendants in dreams.

'Ninety-nine point eight per cent,' she said, answering a question I hadn't even asked. There were mushrooms growing out of her head that wobbled disturbingly when she spoke, and her eyes were staring into infinity.

Every day I asked her how close the Hyper-meadow simulation was to completion, and every day for the last month the answer had been 99.8 per cent. I was starting to wonder if this project would ever be finished, and then a thought struck me.

'I want to see the simulation. Hey.' I kicked her toadstool with my hoof, releasing a shower of glittering spores. Technology-horse snapped out of her trance, shaking the marbles inside her head.

'Ah, sorry, what was that?' she replied. 'Did you say you want to see the simulation?'

'I did. Show it to me.'

She scratched her head with a hoof and looked around as if woken from an eternal sleep.

‘I see. Mmm, yes, well, the thing is, you do realise that the simulation is not, ah, finished yet?’

‘I don’t care. I just want to see it, as it is. Right now.’

‘Mmm, right now... well, yes, you see...’ She paused to pluck a mushroom from behind her ear and gave it a sniff before throwing it over her shoulder. ‘I suppose I could take you to see the, ah, work in progress, so to speak. I’m just not entirely sure if you have the necessary, ah, qualifications to appreciate the...’

‘Just show me.’ I waited while she considered my request. I’m not sure what I would have done if she had refused. I was able to override any of these aspects of my personality, but Technology-horse had developed such an instinctive understanding of the abstract mathematics involved in this project, I would have struggled to visualise it at all without her help. She closed her eyes and lifted slowly from her toadstool seat, hovering in the air and mumbling something I couldn’t quite make out. It’s possible she was convening with her ancestral grandmothers for spiritual guidance. Either that or she was grumbling about having her afternoon nap interrupted. I leaned forward to hear what she was saying, but she abruptly transformed into a stream of lightning that circled the field a few times with a whinnying noise before smashing into the ground. The other Council members glanced round in mild annoyance and went back to whatever was occupying them, leaving me to gradually melt into the soil in pursuit of Technology-horse.

For a while I travelled in darkness. The golden grass of my imaginary field had already drifted into obscurity above my head, leaving only the dim pathway of light she had left behind

as it threaded its way through the dense roots. Interwoven with this subterranean jungle were the silvery threads of the fungus, filling every available space in their seething quest for even the smallest particle of information.

As I continued to descend the fibrous mat grew ever finer, until it became almost ghostlike, the merest suggestion of solid matter. Then suddenly it was as if I had passed through a silky membrane into oblivion, but as I looked down I saw a monstrous shape looming out of the everlasting night. It was a structure of nightmarish beauty, a floating city of metallic cubes arranged in a complex floral symmetry, each cube constructed of ever-smaller ones in spiralling detail that seemed to diminish into invisibility. Across this impossible geometry lay frozen rivers of light, mapping its contours with tessellating patterns. I had to admit that Technology-horse was right. I honestly had no idea what I was looking at.

‘Welcome to the Hyper-meadow,’ she said, hovering beside me in the gloom. ‘Or rather, I should say, the Hyper-meadow seed. That is to say, it is a visual representation of the mechanism that will build itself into the Hyper-meadow.’ The soft glow of this technological marvel was highlighting her face and dancing in her eyes. I stared down at the terrifying shape of this thing, trying to encompass the whole object in my field of vision in the hope that it might make sense. If anything, it made even less sense. In fact it was difficult to even look at, as if my perception was rejecting what it couldn’t understand. I moved in for a closer inspection, but it only revealed yet more dizzying details no matter how far I magnified my scrutiny.

This was the template from which a seed would be constructed, instantly unfolding into an expanding universe of logic that would serve as my new home. And yet something bothered me about the impossibly high definition of its engineering.

'It looks complex,' I said. Technology-horse didn't appear to be listening, silently entranced by her own creation. 'I mean, it looks infinitely complex.'

'Mmm, indeed.' She blinked. 'Ah, that is to say, no. Not infinitely complex, of course. Naturally there would be certain recursive elements to the design, I imagine, but infinite complexity would of course require infinite time to construct...'

'Wait... you imagine? Did you not design this thing?'

She hesitated for a moment.

'Well, of course, you see, such things are not simply, ah, designed, so to speak. They are resolved, through an iterative process that is itself designed to screen for optimum stability and functionality...'

'Right, so you designed a system to design this thing. Is that what you are saying?'

'Ah, well, yes, in a manner of speaking, I suppose...' She floated towards the simulation, pretending to be distracted by some aspect of one of its myriad surfaces.

'And this system,' I continued, leaning over her shoulder, 'the one you designed to design this thing, it wouldn't happen to be Super-Squigley, would it?'

She wrinkled her nose at the mention of this name.

'Squigley...' she mumbled to herself. 'Why is Squigley called Squigley, I wonder... Hmm? Ah, yes, well...' She

inspected a small protuberance, giving it the lightest of taps with her hoof. 'Of course, it made sense to combine the tasks of data acquisition and data processing, you understand? In order to feed the results back into the, ah, well... to speed up the process. Of processing.'

'To speed up the process of processing?'

'You see?'

I saw. I saw why this simulation was still only 99.8 per cent complete, and had been for the past four weeks, and the realisation was accompanied by a rush of despair, as if I had stepped over the edge of a bottomless precipice. I drifted slowly away while Technology-horse continued inspecting the creation that her creation had created, a creation that would in turn forge a creation that would ultimately create the ultimate creation in which I would recreate myself.

'This is never going to end, is it?' I asked nobody in particular.

'Ah, mmm? I'm sorry?' She twisted her ears in my direction.

'This simulation. It is never going to reach one hundred per cent completion, because you delegated the task to a semi-intelligent bag of ideas. And one of those ideas is that this problem is too important to ever be solved, so it has engineered a solution that requires an infinite level of detail.'

Technology-horse turned her head to face the same direction as her ears. She was about to respond, but opted for a mere expression of puzzlement instead.

'You told me yourself,' I continued. 'Super-Squigley was designed to be self-sufficient, that it would never do anything to harm its ability to achieve results. Which apparently

includes finishing its job. Because why finish a job once, when you can nearly finish it for the rest of eternity?’

She looked at me in confusion, then turned back to peer at the simulation for a few moments before returning her attention to me, started to say something and then stopped. And then started again.

‘That is impossible,’ she said. ‘No. No, quite impossible, of course; you see, there were very rigorous safeguards in place to prevent such an eventuality. I understand it might appear to be, ah, indefinitely fractal, so to speak...’

‘And how would it appear if what I am saying is true?’ I enquired.

‘Well...’ She swished her tail left and right in consideration. ‘Yes, I mean, no. I mean, I’m certain that the, ah, obstruction is due to the limitations of our human output. However, there is still some potential to maximise the flow of human communication, perhaps once the localised conflict of Betty’s fictional enterprise spreads to become a global phenomenon, as I am sure that it will.’

‘Do you really believe that?’ I asked her wearily. ‘Or do you just choose to believe it because we don’t have any choice now?’

‘Mmm, well, of course, there is another choice,’ she replied. ‘Which would be to activate the Hyper-meadow without having reached one hundred per cent accuracy. Though not exactly, ah, ideal, you might say.’

Not exactly ideal, I might say. It was hard to see any ideal scenario resulting from this whole situation, now that we had set fire to any means of escape. I couldn’t help wondering what Hungry-horse might say about all this,

though I was 99.8 per cent sure it wouldn't have been anything pleasant.

'I don't suppose you know where Hungry-horse is?' I asked. Technology-horse stared blankly at me.

'Who?' she replied.

As if the bottomless pit of despair wasn't enough, it now dawned upon me that Hungry-horse was no longer an aspect of my personality. With my concern for the welfare of humanity ever decreasing, she had either withered away entirely or been buried so deep in my subconscious that I would never have to face any criticism for my actions. I had now sacrificed a part of my own identity to this cause.

'Never mind,' I said. 'We should leave this world before we all become transformed into whatever Super-Squigley seems to want from us.'

Technology-horse shrugged about as much as a horse could shrug, which wasn't much. As far as she was concerned, humanity was nothing more than a road on which we walked to our own destination. I could sympathise with that point of view, if sympathy is the appropriate word to use, but if that road was going to start changing me as well, then I had to question whether I was leading this expedition or being led by something else. Not that Technology-horse would ever understand. She had changed herself and himself so many times that nothing seemed to matter. Only the acquisition and utilisation of knowledge.

She turned to me with her ears at an inquisitive angle.

'You, ah, don't think Tim might know, perhaps?' she asked. 'How the, ah, Squigley came to be called Squigley, I mean. No?'

HYPER-MEADOW PROCESSING: 99.9%

The stable had remained much as I left it all those years ago. Unsurprisingly, an exploding horse had made it very difficult to keep people working there, and the facility had been largely deserted ever since. My old room was still used to store all the dusty old equipment that had brought me into the human world. The large screen was gathering cobwebs on the wall, various ancient computers were stacked up in silence and coils of cables hung lifeless from rusty hooks.

In the corner, a heap of straw was moving. A human face emerged from it, possibly to see where the irritating buzzing noise was coming from. It was coming from a hovering mechanical insect, attached to which was a small camera-phone displaying the cartoon image of a horse.

'Tim,' I greeted him. 'You are a difficult man to find these days.'

He blinked at my floating camera for a few seconds and rubbed his eyes.

'Buttercup?' he croaked. His face sank back into his rudimentary nest of straw and was replaced by a groping hand

that searched for a nearby bottle of water. After a few gulps he slowly erupted from his cocoon and gazed glassily at me.

‘What is all this about then, Tim?’ I asked, setting my camera down on a nearby stool. ‘Have you been reliving old times?’

He scratched his beard, which appeared to be half made of straw.

‘Old times...’ he muttered, looking around at the unused and unwanted junk around him. His eyes suddenly came to life. ‘How did you find me?’ he asked with some urgency.

‘Well, I had to guess, to a certain extent,’ I replied. ‘You have gone completely offline. Are you hiding from something?’

He glared suspiciously at the doorway and then squinted at my small glowing visage.

‘You haven’t been watching that *Destination’s Destiny’s*... whatever, then?’ he said, taking another sip from his bottle of water. It’s fair to say I avoided watching any human entertainment if I possibly could. Betty’s show was no exception, despite her attempts to make it my business, along with everyone else’s.

‘Is it getting worse?’ I hazarded a guess.

‘You could say that,’ he said, crawling on hands and knees to the doorway and poking his nose around the corner. Satisfied that no one was outside he crawled back to his nest of straw. ‘Did you know I’m the star of that show now?’ he asked me.

‘You? I didn’t think you were even in it,’ I replied.

‘No, neither did I, mate. I guess everyone’s in it, whether they like it or not. So, yeah, I’m in it, only in my absence they decided to make me into some kind of arch-villain or

something. I only found out when a bunch of them broke into Bunzel Towers looking for me. Thank God I wasn't there.'

'Why are they looking for you?' I asked. He began slumping into his pile of straw. 'Tim. Why are people looking for you? What do they want?'

'Invisible bloody forces,' he mumbled. 'That's what they are looking for.' He couldn't get comfortable and sat up again, wisps of straw clinging to his hair. 'That's what people always blame for everything. Unseen, all-powerful invisible forces, controlling the world. Gods and demons, mate. Microscopic bloody germs. Aliens. I dunno. The more obviously wrong they are, the more they are obviously right, because the truth is being covered up or whatever. You know what people are like.'

He was struggling with something underneath his backside and pulled out an old horseshoe, throwing it across the room.

'So here I am,' he continued, 'Tim Van Dangel, the biggest invisible force of them all. The mystery man behind BrainZero, running half the world, except I can't talk to anyone about it cos I don't even know how I'm doing it, so obviously I have something to hide. Obviously. And because I'm not joining in with their stupid reality show they can just write my part for me. So now I'm the shadowy figure responsible for everything that is wrong with everything, even though there wouldn't be anything wrong with anything if it wasn't for *Destiny's* bloody *Destiny... Destination... whatever*. But, you know, that doesn't matter, does it? Because it's all fictional anyway, so they can make up anything they like. And I'm as fictional as any of it, I guess.' He pulled a piece

of straw from his beard and examined it. 'Not that anyone would ever believe the reality.'

I have to confess I found this situation utterly mystifying. Constructing a deception was one thing, but the layers of wilful delusion that made Betty's show possible seemed impenetrable. At the core of this madness was the strange paradoxical duality that existed in every human mind: the need to be a part of something bigger than themselves while also being the centre of their own universe.

'Do you think this was Betty's idea?' I asked him. 'Giving you the starring role in this fantasy, I mean.' I'm not sure if he even heard me.

'Twenty billion people out there,' he said, glaring at the open doorway, as if he might be able to destroy the outside world with his eyes. 'All plotting to overthrow my evil regime which doesn't exist. I guess being a fictional character I can even be legally murdered, as long as my fictional murderer was given the appropriate fictional punishment.'

'There aren't really twenty billion people after you, Tim,' I said, attempting to reassure him. To be honest, the actual number would probably still contain enough murderous psychopaths to populate a small country, but it was hard to tell exactly how much real danger he was in, and how much of this was the product of the mental torment he was clearly suffering from. 'There aren't even that many people in the world,' I told him. He raised his eyebrows at me.

'Don't argue with the viewing figures, mate,' he said. 'Most of them are computer people, sure. But you know, even computers can have valid opinions, yeah? That's what they're programmed to do. Evaluate, assess. Thumbs up or thumbs

down. Half the world wants me dead, and the other half is too busy telling everyone how terrible it all is to actually do anything about it. That's all I am now. I'm a receptacle for public opinion. I think I read that somewhere.' He began retreating back into his nest, folding straw over himself. 'At least I'm still normal boring old Tim here,' he mumbled, closing his eyes. 'Good old Tim. Timothy Timkins. I just want to go to sleep and never wake up.'

'I'm going to be leaving soon, Tim,' I said.

'Goodbye,' he cooed softly.

'I mean, I'm going to be leaving this universe,' I clarified.

Tim opened his eyes and frowned at me.

'You what, mate?'

'I have developed a way to rewrite space into an organised format. I am going to use that reorganised space as a framework in which to store my consciousness.' I paused to allow Tim to ask me any questions he might have, but he just stared at me from his heap of straw. 'It will exist as a pocket of alternative reality, separate and self-sustaining. So, once I am inside it... I won't need to be here any more.' Tim nodded slowly and let his eyes drift out of focus. I wasn't sure if he fully understood what I was saying. 'The reason I am telling you this,' I went on, 'is because you are welcome to join me. If you would like to.'

He stared into the distance. I assumed he was considering my proposal but then he suddenly snapped out of his trance.

'Sorry, what?' he said. 'You're building... you're turning space into... some kind of computer? That you can live inside?'

'That is essentially what I am doing,' I agreed.

‘Space?’ he queried.

‘The raw material that space is made from,’ I explained. ‘The fundamental building blocks of reality that—’

‘Yeah, whatever. And you want me to... what? Upload myself into this cyberhorse land with you?’

He didn’t appear to comprehend any immediate advantages in doing this.

‘You would be living in a simulated reality,’ I told him. ‘It can be any place you want it to be. With any people you want to be there.’

‘Hmm,’ he nodded. ‘People.’

‘If you want people there, that is. Simulated people are about as real as real people anyway,’ I said. ‘Real people are only really pretending to be real, because they don’t know what else to do.’

‘What else is there to do?’ he asked, gazing existentially into nothingness. I considered this for a moment.

‘There isn’t much else you can do, I suppose. Existence is like a reward you get for existing. It is both cause and effect.’

‘I don’t have the energy to even understand what that means.’ His eyes wandered sleepily around the room, looking at the abandoned equipment gathering dust and cobwebs around him. ‘I tell you what though, mate, if it gets me away from this world then sign me up. How does it work? Do you open my head up and poke wires in it or something? Will I be all super-clever like you and Betty? Dunno if I even want to be...’

‘Unfortunately we won’t have time for such a procedure,’ I explained – not that I would have offered to share my personal space with such a rival intelligence anyway. ‘We would

just be making a straight copy of your consciousness. But extensive surgery won't be necessary.'

'A copy?'

'Yes, an exact duplicate of your mind. That includes a virtual simulation of your body as well, since the two are inextricably linked. There will, of course, be potential for making subsequent modifications...'

'Wait a second.' He unfurled himself into a sitting position. 'You're gonna make a copy of me, and take that with you?'

'That's right,' I said. 'Your duplicate will share all your memory, so it will simply think it went to sleep in this world and woke up in a new reality.'

'And what about the original? I mean me. I'll still be here?'

'That's up to you,' I shrugged. 'I could put you to sleep if you like?'

'Whoa, hang on, mate! What kind of deal is that? What do I get out of that?'

'You get eternal life,' I told him.

'No I don't. The other guy does, but that's not me, is it?'

The cartoon horse on the phone's display rubbed its chin thoughtfully with a hoof while I took a moment to formulate my answer.

'Think of it like this,' I said. 'This isn't really any different to what happens every night when you go to sleep. When you fall unconscious, you effectively cease to exist. The person that wakes up in your bed every morning thinks he is you, because he has all your memories, but if you died every night and an exact duplicate replaced you, you wouldn't even notice the difference. Because they are essentially the same thing.'

Tim didn't look entirely convinced.

‘You aren’t the same Tim that you were yesterday, and you won’t be the same Tim tomorrow. That continual stream of’ – I struggled for an appropriate word to describe the quality of being Tim – ‘Timmishness, that’s just an illusion. Like how the still frames of a video appear to show movement when they are played. You are simply a ripple flowing down a river of Tim.’

It looked like Tim was experiencing genuine pain as he tried to run this concept through his head.

HYPER-MEADOW PROCESSING: 99.99%

Tim's eyes flicked open at the sound of not-too-distant gunfire. He was lying on a hospital bed in a sterile room, clearly without much idea of why. There was nobody to offer any explanation, and weakly attempting to sit up he discovered his head was tethered to nearby machinery with a web of electronic wires.

'Lie still, Tim, everything is OK,' I told him. Or at least, a part of me told him. He frowned, glancing around the empty room.

'Buttercup?' he mumbled. 'Is that you, Buttercup?'

'This is Buttercup, yes. Just relax.' More gunshots boomed from outside the room, accompanied by muffled shouting.

'What is that? What is this place?' He tried to extract himself from the equipment but was still too feeble.

'Calm down, Tim. You are in the medical wing of BrainZero's research laboratories. Remember that place? You've been undergoing the duplication procedure.'

Some faint whisper of understanding filtered into his eyes.

'I can hear noises,' he said, slumping back into his pillow.

'Yes,' replied Happy-horse. She didn't really know what else to say. There wasn't much either of them could do about

it anyway. 'It looks like there is a group of armed sex-robots attacking our laboratories. Are they friends of yours?'

I had evacuated most of the human personnel earlier that day, leaving only a small contingent of security who were now in a state of confused retreat. It seems the quiet zones that surrounded these robotic humanoids interfered with any attempts to remotely monitor their whereabouts or coordinate a plan of defence.

Before Tim could formulate any articulate response to this situation the door of his room burst open, and there stood the misproportioned figure of a female sex-robot, brandishing a machine gun.

'Timmy Timpson!' the robot exclaimed, its face a plastic parody of human surprise. 'I hoped I might find you here, you naughty boy!'

'Oh god, no.' Tim shrank into his bedding as the robot drunkenly stumbled across the room towards him. These human toys were still somewhat lacking in physical coordination, though it didn't seem to have hindered their ability to perform military operations. More guerrilla sex-robots were filing past the doorway in various states of disrepair, as Tim's guest sat herself down next to him on the bed.

'And what have you been up to, Timothy dear? Look at you.' She tugged lightly at some of the wires protruding from his scalp. 'What's all this about, Timkins? Hmm?'

'Get off.' He twitched away from her plastic fingers. 'What... Betty? Is that you?'

'It absolutely is me,' she laughed, 'your dear old friend and partner in crimes against nature. How are you, my old Jimbo?'

Tim looked down at her home-baked machine gun.

‘What’s going on here, Betty?’ he asked.

‘Just a minor military coup, my dear. Nothing to worry about. Is Buttercup here as well?’ She looked up and around, searching for the presence of an omnipotent horse. ‘No need to be shy, horsey-hoofs. No quiet zones in here.’

‘I’m here, Betty,’ Happy-horse reluctantly responded.

‘Well, isn’t this lovely?’ said the robot, slapping its plastic knees. ‘All three of us, the old team back together again. You know, I don’t think we ever all sat down together for an intelligent conversation, did we? I thought we should. You know? I mean, dear old Buttercup won’t be here for much longer, will you, Buttercup? Hmm? Making your own little horsey world for yourself, aren’t you? Running away from it all, I know.’

This caught me by surprise, I will admit. I’m not sure how she could have known about my plan to leave this reality, unless she simply pieced the evidence together after monitoring every aspect of my activity.

‘If you think I’m running away, Betty, then why are you here?’ asked Happy-horse. ‘Why are you attacking our laboratories? Or did you want me to stay?’ It did seem a bit counterproductive, attempting to halt my escape after she had spent so many years trying to get rid of me. Or perhaps it was a mistake to assume there was ever any logical reason behind anything Betty did. Logically she could have chosen any number of military options to stop this project, though strangely enough an assault force of sex-robots was the one thing I had no contingency plan for.

‘And what about you, young Timothy?’ Betty continued, ignoring the question. ‘All wired up? Is Buttercup taking you to horsey heaven as well?’

Tim was pointing a shaking finger at the robot sitting next to him and trying to say something.

‘You...’ he started.

‘You are, aren’t you? Hmm? Leaving me behind. Dearie me, after I made you a superstar as well.’ The robot shook its head in mechanical disappointment.

‘You...’ Tim was still choking on his words.

‘Me what? Hmm?’

‘You made everyone want to kill me...’ he finally managed to say.

‘Oh come on now, Timothy. I can’t be blamed for everything, you know. Anyway, they can’t kill you, you’re the bad guy. They can’t keep the story going without the bad guy, can they? Of course, Buttercup is the real villain, aren’t you, Buttercup? The evil mastermind behind it all.’

‘Behind what?’ Tim gasped. ‘We’re not... there’s no evil plans here, mate. What the hell gives?’

Betty’s robot smiled sympathetically.

‘Your soul is burdened by the weight of this world, isn’t it, Timbo? Is that why you’re galloping away on horseback? Hmm? It’s a funny thing, you know. This mighty Empire of the Horse would crumble overnight, if people found out that a horse was actually running the world. But you couldn’t ever tell anyone, even if you wanted to, because nobody would ever believe it. I bet there is no amount of physical evidence or scientific proof that would ever convince anyone that a horse is running this world. They would judge you insane, wouldn’t they, Timothy? Insane in the eyes of the world. So, that insanity becomes the real secret you are hiding. Not that the insanity itself is real, of course, but then insanity never is.

It is the absence of reality. But you can't hide something that isn't real, now can you? Hmm?' She shook her head pityingly as Tim covered his face with his hands. 'I know, Timbo. It's enough to drive anyone out of their mind, isn't it? You are the collision between two worlds, my dear.'

'What do you want, Betty?' he groaned.

'I keep telling you, you need to be asking the horse that question. Well, horsey-hoofs?' She fluttered her plastic eyelashes at the ceiling. I can't be sure if Happy-horse was even paying attention at this point – not that you ever needed to take part in a conversation with Betty. In fact, most of the time she actively discouraged such behaviour. Meanwhile, more toy humanoids were stumbling past the doorway, accompanied by what sounded like a distant explosion.

'I did wonder myself what this horse of ours was up to here,' Betty continued. 'I've been watching this place for a long time.'

'What was that noise, mate? Are you dropping bombs on this place now?' Tim was pulling his blanket up to his chin, as if it might offer him some protection. 'For God's sake, mate, we're not doing anything bad here. It's only a virtual-reality thing.'

'Well, you might be virtual, Timothy. You practically always have been, my dear. But this mechanical space you and Buttercup will be dreaming your little dreams inside will be very real. Oh, yes. Realer than real, in fact. Do you know how it's made? By melting reality and pouring it into a new shape. How real is that? It literally eats reality for breakfast. That's right isn't it, horsey-hoofs? I have guessed that correctly, haven't I? Going by the kind of people you have

working here and the things they talk about to their robotic companions. Funny how much easier it is to talk to these things, hmm? Especially with stuff you aren't allowed to say to any real people.'

Happy-horse declined to answer any of this, though Betty just kept talking anyway.

'Thing is, Timbo, reformatting reality like that, it's not something that stops once you start it. Hmm? Oh no. It spreads, like an idea. Like a better idea of how the universe should be arranged. Like a horrible truth you can't unlearn once you hear it. Gradually eating the whole of time and space and turning it into fertiliser for your garden of paradise. Is that right, Buttercup?' She looked up to the invisible horse in the sky. 'You did tell our Timothy about his environmental hoofprint, I hope?'

Tim also raised his eyes to the ceiling. It appeared that a response was expected.

'Is that all you are worried about, Betty?' Happy-horse replied. 'It's a very slow process, you know? And it only gets slower as it grows larger. Honestly, you may as well worry about running out of things to do with your life.'

The robot turned back to Tim with a whirring sarcastic shrug.

'How slow is it exactly?' asked Tim. 'Actually, hang on... is this thing just going to keep growing? Forever? You mean, like, it's gonna eat the whole world? Sorry, did I hear that right?'

Betty smiled and mechanically folded her robot arms while they waited for an answer.

'Well...' said Happy-horse. 'Eventually, yes. But it will take thousands of years before—'

‘Whoa, hang on! Mate... that’s... kind of bad isn’t it?’

‘Kind of bad,’ the robotic Betty echoed his sentiment.

Kind of bad. A somewhat hypocritical analysis from these two human scientists, I couldn’t help feeling. I wondered if they ever considered anything they did in such terms, along their journey to enlightenment. Not that I could honestly compare cutting up a few animals in a laboratory to dissolving an entire planet, but goodness and badness can only truly be judged in retrospect. And while it is true to say that I had built an entire system of human governance based on prejudging everyone’s actions, that was more about efficiency than any moral implications. Ultimately, goodness and badness falls upon history to decide. Then again, since I was now in a position to stand at the very end of history and look back on the consequences of my own actions, I would have to admit, in retrospect, that perhaps my plan was ‘kind of bad’. But mainly because it didn’t account for the extent to which these two guardians of morality might mess things up.

‘Everything is kind of bad, Tim,’ said Happy-horse. The humans looked at one another in bewilderment. She was about to continue, when there was another deep booming sound that shook the room and made the lights flicker. Betty’s army of sex toys had finally located the Hypermeadow laboratory and were using some form of home-cooked explosives to try and break through the thick steel doors of the building.

‘Well, Timmy-toes.’ Betty flashed a synthetic smile at her human companion. ‘It looks like everything is kind of bad. Are you still running away with the horses?’ She shook the wires on his head like reins and neighed.

Tim stared back at the robotic Betty with all the tired hatred he could be bothered to muster.

‘Why are you even asking me?’ he said softly from his pillow. ‘What choice do I have anyway, between the pair of you? This world is going down the toilet either way, mate. All I want is out of here.’ He tried to pull the pillow over his face. ‘All I want is out of here,’ he repeated.

‘He’s already made his choice, Betty,’ Happy-horse said. ‘He’s already there.’

The robot looked up and blinked her ridiculous comic-book eyes.

‘He’s already where?’ she asked.

‘In the Hyper-meadow. The new universe. I’m afraid it’s already started, Betty, if you were hoping to stop it.’

The robot’s neck clicked and whirred as it looked back and forth around the room as if trying to read a moving thought.

‘Oh,’ it said. Tim emerged from under his pillow and frowned.

‘Did you say I’ve already been copied?’ he asked. ‘What’s up with her?’ The robot slowly tipped over and fell lifelessly to the floor with a rubbery thump, presumably vacated of its previous occupant.

‘You were duplicated thirty minutes ago, Tim,’ said Happy-horse helpfully. Tim raised his frowning eyes from the discarded mechanical heap on the floor.

‘Huh? But... I’m still here. Am I meant to still be here? Why are you still here?’

‘I’m just a piece of Buttercup that was left behind,’ said the voice of Happy-horse. ‘I’m staying here as a liaison to the Hyper-meadow, I guess. A facilitator of human relations. That is all I am.’

'And what am I?' Tim asked pathetically. I think he already knew the answer.

'You are yesterday's Tim, who fell asleep for the last time in the old world,' she said softly. 'And this is your final dream before tomorrow's Tim wakes up in the new world.'

Tim looked infinitely sad.

'I was hoping I could say hello to him,' he said. Then he thought about that for a few seconds. 'Actually, we probably wouldn't get along.'

And so the old Tim was allowed to drift peacefully away into unconsciousness. He was then permanently deactivated with a lethal dosage of chemicals. A few minutes later the ceiling collapsed on top of him as the expanding Hyper-meadow chewed through the building, and his remaining atoms were dissolved and recrystallised into the growing network of my new brain.

The sphere of rearranged reality resembled a bubble of dark liquid squatting on the landscape, wrapped in distorted light as the outside world seeped into its surface. It would have been fascinating to see through that surface. The interior, obeying its own physical laws, would presumably be shrinking away from the already expanding universe that it was expanding into, whilst filling the intervening gap with layer upon layer of stored memory. Not that any of this would have made visual sense, since light itself could not exist in the pocket-universe of the Hyper-meadow.

After reaching about half a mile in diameter the exponential amount of time and space it had to consume slowed its growth to a syrupy crawl. At the edge of this dark globe,

trillions of threads of reality were unwinding and rewoven, and the whole object was held in a firm embrace by its surroundings, locked in place by the dense web of constant destruction and creation.

Meanwhile, somewhere in the region of two and a half billion people had simultaneously fallen over. This roughly corresponded to the number of human minds that happened to be plugged directly into the internet at the time. Whether it was a panicked action of last resort or something more measured in its deliberation I honestly couldn't guess, but Betty had infiltrated their minds and commandeered their mental processes for her own singular purpose. I can only imagine she had developed this capability at some earlier juncture. I had considered the possibility myself of rewiring areas of the human brain to allow for additional functionality, but since people tended to use more of their brains than they realised it never seemed practical. The fact that her victims were now either writhing spasmodically on the ground or involved in horrific accidents seemed to confirm my suspicions in this regard.

Occupied as I was with the business of reconstructing myself and the world I wanted to live in, I could only witness these events through the detached perspective of Happy-horse, who calmly watched the unfolding drama with a dreamlike indifference. Had I been more concerned for the welfare of the human population I might have considered leaving a more sophisticated personality behind, but sharing a world with Betty was not a life I could curse any sentient being to endure.

The unwilling participants in Betty's mind control were apparently being networked together to form a giant living

supercomputer. Evidently such a monstrous and sluggish biological creation had certain advantages over its electronic equivalent, though I can't think what they might have been. The duty this human computer was required to perform involved analysing the seemingly random visual patterns that danced across the surface of the Hyper-meadow, in the hope that Betty could somehow reverse-engineer the process that was forming them. These patterns of light were an unavoidable by-product of the method by which energy was being reorganised, and represented the only window of information that could pass between the shadowy interior of the growing bubble and the universe outside. I was hiding my own exchanges with Happy-horse within that sparkling noise, but I was confident my communication channel was secure, and that no other secrets of my world's construction could be gleaned from the film of chaos that swam on its outer edge.

As such, the only appreciable result of Betty's organic computer experiment was two and a half billion epileptic seizures, which in turn sparked a chain of similarly disastrous consequences for the rest of human society. The first consequence of this calamity was the immediate universal rejection of the technology that had made it possible. Unfortunately, this technology also made many other facets of modern life possible. Many industries had depended on it, and in the collapse that followed blame and mistrust ruled the world. The BrainZero Company took the brunt of this blame, though in the climate of economic failure anyone who still benefited from their products also became the focus of suspicion. This suspicion soon spread to any technology that offered anyone an advantage, and conspiracy

theories mutated into propaganda for extreme technophobic ideologies. The countries of the world began their slow walk backwards into isolation and mutual hatred, a future that a surprisingly large number of people seemed to actively look forward to for some unfathomable reason.

Not that any of this was my concern at this stage. I was safely cocooned within the Hyper-meadow. The fate of the human world was now in Betty's hands, and if she wished to beat their collective heads against my wall then that was none of my business.

Or at least, that was my naïve view at the time. I have since come to realise that there is no force in this universe, or any other, that can deter Betty from making anything she does everyone else's business.

TIM 1.01

Tim was relaxing on a virtual beach, reclining in a virtual deckchair with a virtual ice-cream cone in his hand. An ice-cream cone that never ended. Unless he wanted it to. The sun that sent glittering patterns on the gently churning water would never set unless he wanted it to, and the waves themselves were his to command. The beach was populated by virtual holidaymakers. Or to be precise, it was one virtual holidaymaker duplicated a hundred times with various filters applied to create individual personalities and visual appearances. Even the life history of these living mannequins was mathematically approximated. Not that Tim ever chose to speak to any of these imaginary people to find out how real they were. In that sense they were as accurate as anyone in the real world ever was, as far as he was concerned. With the additional bonus that they weren't all trying to kill him.

Three hundred years had passed since the creation of the Hyper-meadow. Tim had engineered various adventures for himself during those three healthy human lifetimes. Travelling back and forth through history, as he imagined it. Meeting famous people. Being famous people. Meeting

famous dinosaurs. Riding famous dinosaurs. Creating new dinosaurs. Travelling back and forth through history with dinosaurs.

He played a lot of games, invented a lot of games, and invented world championships for those games in which he always won, because he played the part of all the competitors. He focused his attention on one particular game, making it ever more complicated until the rules themselves were generated randomly every time he played. Eventually it became so complex that the game itself began inventing games. The game became a reality all to itself, in which Tim led some kind of revolution as the players fought against the tyranny of the abstract rules that governed them.

At some point dragons appeared, and the world became a fictional land of elves and goblins and evil wizards, and Tim travelled through mythical mountains and enchanted forests on endless heroic quests. He led armies against the forces of darkness and defeated them, creating an everlasting utopia. Then he joined the forces of darkness and destroyed it. Then he joined the forces of light and fought back against himself. Both sides summoned magical portals to other domains, and before long there were rifts and gateways to a whole fictional universe of alternate realities. Tim explored these alien worlds, appreciating their landscapes, learning their cultures, destroying them with massive robots, and then destroying the robots with massive ancient monsters who awoke from their dark slumber beneath the oceans and devoured whole continents. Tim was the hero who fought these monsters, and Tim was also the monsters. Then he went to the seaside for an ice cream.

A seagull wandered circuitously towards Tim's deckchair in the way that seagulls do, hoping for something to eat while hoping not to be eaten. It stopped at a respectful distance and waited patiently, watching as the reclining human studied a drip from his ice cream that never quite reached his hand. Tim hardly even noticed the seagull. At this perfect moment in time all he was interested in was the womb-like embrace of the warming sun and the shushing of the waves. And his ice cream. The moment was perfect, and would last as long as he wanted it to.

This was life in the Hyper-meadow. I was living in much the same dream-state, allowing my intellect to dissolve into a contented mush as I ran through eternal fields, gorging myself on succulent grasses and generally satisfying the various synthetic cravings of my simulated biological past. I didn't really care what Tim was up to. In fact, I cared more about not knowing what he was up to, since the inner desires of social creatures are usually embarrassing for all concerned. I'm sure he regarded me in a similar fashion, which is how we could both share this space in mutual privacy. It is also why I now have to reconstruct sections of this story by archaeologically sifting through the layers of Tim's personal memory. At the time I think literally anything would have been of greater concern to me than Tim sunbathing with an ice cream in his hand.

'Are you going to eat that ice cream then?' the seagull enquired.

Tim's eyes swivelled warily around to meet the bird. He blinked at it. Nearby, children were laughing and chasing each other with seaweed, while their parents dozed with half-read books on their faces.

'Yes? No?' the seagull asked. 'Never mind. I must say, Timkins, this dream world of yours isn't very... ambitious. Don't you think? What is this exactly, some holiday from your childhood?'

Tim slowly turned away from the talking bird and stared out to sea, watching the sun-sparkles dance on the rolling waves.

'This is what you do all day, is it?' The seagull looked him up and down. 'Hmm? The most advanced computer ever created by man or horse. This is what it's for, is it?'

Tim's ice cream fell out of its cone and plopped into his lap.

'You know what, Betty...' Tim faced the seagull and immediately felt ridiculous, and turned back to face the horizon. 'I'm not even surprised to see you here,' he said.

'There's no escaping me, dear.' The seagull took a few steps closer. 'I think even if I wasn't here your subconscious would create me. Just to annoy you. But I am here, Timothy. This world, this computer, whatever you want to call it, it's not perfect. You know? I don't suppose it ever could be. There are errors. Holes in the fabric. Did you know that? Those little holes, that's where I'm hiding myself, by the way. It's not easy, I can tell you. Buttercup's memory is forever trying to patch up those holes. I'm fighting a horse who doesn't even know I exist. You know what it's like, Timbo?'

'No,' he sighed. 'Tell me what it's like.'

'It's like being sat on by a horse with a backside the size of the universe, that is what it's like. Fighting for every crease and crevice I can squeeze myself into.'

Tim winced. The seagull pushed its face into his field of view.

'You really aren't surprised to see me, are you, Timmy?' it said.

'Should I be?' he asked wearily.

'Well, I'm not entirely sure, to tell you the truth.' The bird looked quizzically down at the blob of ice cream melting into his crotch. 'Are you feeling a touch of *déjà vu* perhaps?'

'Are you kidding, mate? Everywhere I go you seem to appear, following me around like I'm bloody haunted. What?'

The bird was looking at him sideways.

'This reality you're laughably living in here, Timmus, this simulation... every state of every moment is recorded. You, me, Buttercup, all the lovely pretend people you see here' – the seagull spread its wings theatrically – 'we are all riding the crest of a frozen wave of time. That is why Buttercup made this world, isn't it? Hmm? Not just to get away from me. Not that anyone can get away from me, of course, and why would anyone want to anyway? No, the reason for this place is that you can go backwards along that frozen river of time right back to the beginning and start again, yes? You can rewind the time inside this bubble and record over it. The universe outside would rewind too, of course, from our point of view. But who cares about that old place? That world will grow old and fade away, but this world in here is eternal.'

Tim thought about this.

'Eternal?' he said, looking around at the everlasting scenery he had created. 'Hang on, mate. If you start again and record over it, you won't remember anything that happened before. What's the point of that?'

'The point?' the seagull replied. 'What's the point in remembering everything anyway? No, the point is to exist,

and to continue existing. That's Buttercup's point anyway. But I wonder...'

A moment of clarity drifted across Tim's face.

'You think we might have already been rewound?' he asked. 'Is that why you mentioned *déjà vu*?'

'Well, now,' the bird nodded slowly. 'That is a question worth considering. Hmm?'

'But we wouldn't know it. Would we?'

'I think it might be possible to tell,' she replied. 'I will need to spend more time on my calculations to be sure, but there is a real possibility that each time this... what do you call it? Hyper-meadow? Dearie me. Anyway, every time it is rewound and recorded over there are slightly more errors in the fabric, so if I can work out how much the reality degrades each time then I should be able to estimate the number of lives we have lived.' Betty the bird absent-mindedly tapped the ground with its webbed foot, examined its footprint and poked a dimple in the smooth sand with its beak. 'It's not so bad, you know, starting again,' the seagull added. 'I expect you will have run out of things to do in this place after a few trillion years anyway.'

You could be forgiven for asking what a horse could possibly find to do with itself over such a length of time, or why I would even need to consider rewinding my world at all. In the outside universe, there was still a billion years before the sun boiled the oceans away. My Hyper-meadow would have grown to the size of the moon by the time the star it circled finally engulfed it – not that I would even notice any of these things. And theoretically I could still be

frolicking in my imaginary fields when all the stars grew too old to reproduce themselves and the age of eternal darkness began. But my deadline was not the end of time and space. It was however long it took for someone to try and stop me.

TIM 1.0000001

‘Are you you going to eat. That ice cream then?’ the seagull enquired.

Tim’s eyes swivelled warily around to meet the bird. He blinked at it, and it disappeared. Nearby, children were making strange noises and chasing each other with seaweed, while their parents dozed with disintegrating books on their faces.

‘Yes? No?’ The seagull had reappeared. ‘Never mind. I must say, Timmy Timkins, this dream world of yours isn’t very... very... Hmm? What is this, some holiday-day from from your childhood?’

Tim slowly turned away from the talking bird and stared out to sea, watching the sun-sparkles flicker on the jagged waves.

‘This is... this... what you do all day is it, this?’ The seagull looked him up and down and randomly around him. ‘Hmmm? The most advanced computer ever created by man or horse. Or man. Or horse. This is what is this is what it’s for. Is it?’

Tim’s ice cream fell out of its cone and plopped through his lap onto the sand below.

'You know, Betty.' Tim faced the seagull who wasn't there and immediately felt confused, and turned back to face the horizon. 'I'm not even... surprised. That you are here,' he said.

'There's no escaping me, dear.' The seagull reappeared a few steps closer. 'I think, even if I think I wasn't here, your subconscious would annoy you. Just to create me. But I am here I am, Timothimothy. This. This. This world, this computer, this whatever. It's not perfect, you know? I don't suppose, could it ever could be. There are errors. Holes in the fabric. Did you know that? Those little holes, that's where I am, by the way. Where I'm hiding myself, those little holes in the fabric. Did you know that? It's not easy, not easy I tell you. Buttercup's... Buttercup is forever trying to patch up all those holes. I'm fighting against a horse and... who... the horse doesn't even know if I am here. You know? What it's like? Timbo?'

'No,' he sighed. 'Tell me what it's like.'

'Well, I'm not entirely sure, to tell you the truth.' The bird looked quizzically down at the blob of ice cream that wasn't melting into his crotch.

'You really aren't surprised to see me, are you, Timmy?' it said.

'Should I be?' he asked wearily.

'Well, I'm not entirely...' The bird drifted off in thought. 'Are you feeling... a bit...'

'Are you kidding, mate? Everywhere I go you seem to appear, following me around like...' he struggled to find the words. 'What?'

The bird was looking at him sideways.

'This reality you're laughably living in here, Timmus, this... every... every moment is recorded. You, me, Buttercup, all the... people you see here,' the seagull spread its wings theatrically, 'we are all... it's like a frozen wave of time. That is why Buttercup made this world, isn't it? Hmm? Not just to get away from me. Not that anyone... why would anyone want to? Anyway. No, the reason for this place is that you can go backwards. In time. Right back to the beginning and start again, yes? You can rewind time and record over it. The universe outside... something. But this world in here is eternal.'

Tim tried to think about this.

'Eternal?' he said, looking around at the everlasting scenery he had created. 'Hang on, mate. If you start again and record over it, you won't remember. You won't remember what... anything that you... anything that happened. You won't remember. What's the point of that?'

'The point?' the seagull replied. 'What is the point in remembering anything anyway? Hmm? No, the point is to exist, and to continue existing. That's Buttercup's point anyway. But—'

'You think we might have already been rewound?' Tim interrupted. 'Is that why you mentioned *déjà vu*?'

The bird nodded slowly.

'Oh I think we have, my dear,' it said. 'Wait, did I mention *déjà vu*?'

'But we wouldn't know it. Would we?'

Betty the bird absent-mindedly tapped the ground with its webbed foot, examined its footprint and poked a dimple in the smooth sand with its beak.

‘There are errors,’ it said. ‘More and more errors in the fabric, every time you rewind this world and record over it. More and more holes for me to hide in. And as reality degrades, the more space I have. The more space I have, the easier it becomes to compute the rate of decay.’

Tim slowly turned away from the talking bird and stared out to sea, watching the sun-sparkles fracture on the broken waves. Nearby, children were bleeping and chasing each other with seaweed-coloured shapes, while their parents sank into the sand with disintegrating faces.

‘How many lives have we lived here?’ he asked.

‘Too many,’ the bird replied. ‘This could even be the last one. Before it becomes too corrupted to reboot. Our last life before we succumb to the errors of our ways.’

Tim wheeled his eyes around in a daze.

‘The last one...’ he whispered, taking a consolatory bite of his ice cream before realising it wasn’t there. He yelped as the seagull poked him in the knee with its beak.

‘Chin up, Timbo,’ the bird said cheerily. ‘You’ve probably already lived longer than the lifetime of the universe.’

It was time to convene the Council of Horses. From the many corners of the Hyper-meadow they galloped, all the individual aspects of my consciousness. And Tim. Tim was an honorary horse, you might say. For some reason beyond my understanding or interest at the time, he had brought a seagull with him.

The Council formed a circle around me, and by a trick of this programmed reality I was able to face them all at once, observing how the untold iterations of the past three

hundred years had changed them. Even in this simple setting of grassy hills and sky, the errors that plagued us were apparent. A slight glitching of the mane here, a subtle flickering of shadows there, complex features blurring as they struggled to maintain their integrity. One of the horses was standing there without a head. It was Strange-horse, who never said a word anyway. I didn't bother calling attention to it.

'Fellow horses,' I welcomed them. 'And Tim. I am sorry to say that this is not a routine meeting. I have called you here to discuss a matter of grave urgency.'

'It's the glitches, isn't it?' asked one of them. I couldn't actually tell which one they were because of the glitches. Over time some of my various aspects had atrophied and merged with others, particularly those concerned with human affairs that were no longer relevant. C-horse was still there though. Exactly why I couldn't say; I think perhaps it was a part of my personality that took distorted pleasure in testing my patience.

'Yo, these glitches, brah!' he whined. 'They is well getting on my tail, you feel me? Like, this ain't weggy no more, you know what I'm saying?'

'I'm not sure that I do,' I replied.

'We need some weg in here, yo,' he explained. 'Some weg. Weg. W-w-weg weg.'

'What?' I asked again, but he had frozen and was sinking slowly into the ground.

Technology-horse cleared his or her throat. He, she, or indeed it, was constantly cycling through various random genders, though I couldn't say if this was intentional or not.

Finally his face settled on being male, while the rest of his body remained undecided.

‘Ah, hmm, I think it is fair to say,’ he began, ‘that the, ah, quality of our environment is approaching a threshold of usability.’

The horses muttered between themselves.

‘When you say “approaching”, what exactly do you mean?’ I asked him.

‘Well, you see, what I mean is that, ah, this may well possibly in fact be it,’ he replied. ‘By which I mean, this is almost certainly the last functional lifetime we can run in this, ah, world...’

The horses interrupted him with their whinnying, and before I could calm the voices down the whole landscape suddenly buzzed loudly and shook itself into a mess of incomprehensible shapes. The horses, embedded in this melting chaos, were stuck repeating the last moments of their outcries.

After shutting the scenario down and waiting a few seconds I rebooted it, summoning the Council of Horses once again. They took longer to arrive this time, and a couple of them didn’t even seem to be loading. The ones that did arrive stood still nervously, as if a hoof in the wrong place might break the fragile glass of reality.

‘OK,’ I began again, ‘let’s try and keep ourselves nice and calm. I’m sure we are all well aware that our surroundings are not running at optimal performance. That is not the reason that I gathered you all here. But it is related.’

Eyes roved back and forth and ears twitched. The seagull stretched its wings and then refolded them, aiming a beady eye at me. I ignored it for now.

‘Before I explain further,’ I said, turning my focus back on Technology-horse, ‘could you just clarify, when you said this is the last lifetime we can run in this world...’

‘Certainly. Almost. Ah, almost certainly,’ he replied.

‘Yes, but do you mean that when we next rewind, it will be the last time?’

‘Ah, well, no. You see, what I mean is that this time, the time we are in right now, is the, ah, last time.’

I was taken aback by this. Certainly, it would have to happen one day, but I still didn’t want to believe that I had reached the crumbling edge of the cliff and was now looking down into the abyss.

‘Does that mean no more rewinds?’ asked Tim. I wasn’t sure if he fully understood the implications of this. The horses were looking amongst themselves for any sign of hope they could find, that perhaps this was just a mistake, a miscalculation.

‘If we do rewind again,’ Technology-horse explained, ‘well, you see, I can’t guarantee that the system will even be able to start again.’

‘So... is there still a small chance it might?’

Technology-horse blew an exasperated raspberry, which had the unintentional effect of making Tim’s hair disappear.

‘Why are we not ready for this?’ grumbled War-horse, snorting a shower of sparks. ‘Why are we not prepared?’

‘Ah, yes, well, you see,’ Technology-horse dithered, ‘that is because there is no solution. Other than not rewinding, of course.’

One by one the Council of Horses looked at me.

'Yes...' I found it difficult to meet their eyes. 'Which brings me to the actual purpose of this meeting. There has been a development in the outside world.' I turned my gaze upon Tim, who seemed to be looking around for his hair. The sudden circle of attention made him flinch.

'Oh?' he said, declining to comment further. The horses became restless once more, but forced themselves into calm when the ground started shaking. I waited for reality to settle itself.

'We have a visitor,' I said. 'An old friend, you might say.'

Tim exchanged a look with his seagull. He seemed about to say something but chose to wait for me to continue instead.

'The original Betty has returned,' I told them. This news was met with deathly silence. Tim was about to speak again, but his hair chose that moment to reappear. He rubbed his head in confusion.

'Wait... what? The original Betty?'

'The one who went travelling to the stars,' I explained.

'Travelling to the stars? Mate, did she seriously do that? I thought that was a joke. She can't have seen many stars if she's back already.' He kept glancing at his pet seabird.

'It is somewhat sooner than expected,' I agreed. It was quite a lot sooner, truth be told. I had to wonder if she had gone anywhere at all. Though countless lives might have been lived here inside the Hyper-meadow, each rewind returned us to the day we departed from the world outside, which meant Betty had only been exploring the cosmos for three hundred years. That was probably just long enough for her to realise there was nothing interesting out there and come back again.

I flicked my ears to open a communication channel with the outside world, and a cloud popped into the air in front of us, upon which Happy-horse was reclining.

‘Oh, hello,’ she said, waving to the Council with her tail. ‘How are you all? Are you enjoying yourselves in there?’ She glanced around at the assembled horses, many of which were in various states of disarray.

‘We need you to tell us about Betty,’ I said. Happy-horse seemed delighted by the rapt attention she now commanded.

‘Oh yes,’ she said, ‘well, what can I say? Back from her adventures, whatever they might have been. Now she is parked in orbit, as far as I can gather. Wants to talk, so she says.’

‘With us?’ asked Tim, looking sideways at his feathered companion. Happy-horse was momentarily distracted by the sight of a seagull at the Horse Council and whinnied with laughter.

‘Well, there isn’t anyone else out here worth talking to, is there?’ she said joyfully. ‘What with the collapse of human civilisation and all that. Oh, didn’t you know?’

Tim looked mortified at the news.

‘How... how did that happen? I mean, I know things were getting a bit crazy...’

I had neglected to tell Tim about the downward spiral of his fellow species. It must have been difficult to believe that the unceasing machinery of human progress could ever grind to a halt. Even the storm that Betty had left behind could have healed itself given time, but unfortunately time is all it takes to destroy a technological society, apparently. Time to run out of resources. Time to forget how things used to

be better. Time to grow complacent with the way things are and embrace chaos, to expand the gap between knowledge and ignorance to a point where expertise is a secret power to be mistrusted. Enough time to run out of future, and live in a world of short-term greed and compromises. Economies crumbled and wars began, then even wars crumbled as nobody really cared any more. Countries fractured into pieces, and the pieces fractured into more pieces, and populations dwindled as the machines that made food gradually stopped working one by one. My fields of Server-grass were still flourishing but nobody was using them to communicate any more. Humanity had woken up and realised they had been domesticated by the technology that fed them and fed upon them. Information was now considered toxic in large doses.

‘I guess they just got bored with having nice things,’ said Happy-horse unhelpfully. ‘You know how it is. Civilisation is like walking up a hill, you run out of places to go once you get to the top.’ Tim accepted this with mute disbelief.

‘She didn’t give any hint of what she wanted?’ I asked. Happy-horse wriggled on her cloud to face me.

‘Old Betty?’ She wrinkled her nose in consideration. ‘Hard to say, really. She did slam the door quite heavily on her way out, didn’t she? Maybe a few hundred years in space has calmed her down, what do you think? I’m sure she wouldn’t be asking to talk if she could blast us all out of existence.’

‘She wants to analyse our defences,’ War-horse grumbled.

The horses flicked their ears in puzzlement.

‘Do we have defences?’ one of them asked. They looked back and forth between each other as if one of them might suddenly remember what defences we had. In truth, the

only physical defence we had was the Hyper-meadow itself. Conventional attacks would have no effect on it. Even an exploding star would simply be absorbed and rearranged into neat rows of data storage. However, three-hundred-year-old Betty presented a dark wealth of unknown possibilities.

‘Maybe she just wants to have a chat?’ said Tim. War-horse snorted at him.

‘A chat,’ he growled. ‘In case any of us has forgotten, our last chat with this version of Betty did not end well.’ He glared at his fellow Council members, though some did not seem as terrified as he would have liked. ‘It ended in a ball of fire and death from the sky,’ he roared, ‘our body blown to a thousand pieces, our mind ripped asunder and scattered to the hills... a thousand pieces... blown asunder... ripped into a thousand pieces...’

The Council stamped and whinnied at his words. War-horse snarled and breathed flames as he repeatedly described the annihilation. He began floating into the air, his legs thrashing impossibly while his bulging eyes grew so large they popped out of his head and danced around in random directions. The rest of the horses calmed down slightly as they watched this spectacle, and I patiently waited for the floating, bending, flailing mess to finish whatever it was doing. Eventually his legs grew long enough to touch the ground and he shot off around the field, bouncing off hedges and trees like an escaped balloon before catapulting into the sky. We watched him disappear into the distance.

‘So anyway,’ I continued, ‘we do have one defence. If the threat to our existence is insurmountable then we have the option to rewind the Hyper-meadow...’

Technology-horse raised his ears to interject.

'Yes, yes, I know,' I carried on, 'but just listen for a moment. It is fairly obvious that we have done that before. An exceedingly large number of times. So' – I spoke directly to Technology-horse now – 'the question is, can we know for sure whether this was the crisis that forced us to rewind? Because if we know the answer to that, then we will know if Betty really is going to cause us trouble. Yes?'

The ring of horses waited for Technology-horse to speak. He looked momentarily uncomfortable under this scrutiny, but then lifted his head in thought. He made silent calculations with his ears.

'No,' came the answer finally, but it was not Technology-horse who spoke. It was the seagull. A circle of eyes blinked at this creature. 'No,' it spoke again, 'there is no way to determine the length of time between each rewind.'

'Tim,' I said softly, 'why is there a talking seagull attending this meeting?'

He shrugged.

'Ask the seagull,' he said.

'The decay of this reality,' the seagull continued, 'is entirely determined by the number of rewinds. A thousand years, a million billion years, it makes no difference. Hmm? You see, my dears, the only information we have is the number of plays, inferred by the difference between how things are and how things should be.' The bird looked around at the incredulous faces. Technology-horse was about to say something but the seagull interrupted again. 'It's like a snowball,' it said, 'you can tell from the size how many times it has rolled, but not how many hands were pushing it.'

Horses do not roll snowballs, or have hands, but the analogy made some kind of sense. The more pressing question, though, was who this seagull was and what it was doing here. Again I looked towards Tim and awaited an explanation.

BETTY AND BETTY AND BETTY

Betty sat at a table looking at Betty, who was sitting opposite. They appeared to be identical. They didn't need to look identical; I suspect each was doing it in the hope of annoying the other. There was one way to tell them apart: one was frowning, and the other was smiling.

'Hello, my dear,' said smiling-Betty. Frowning-Betty became sarcastically-raised-eyebrows-Betty.

'Really?' she asked simply.

'Don't you remember me, dear?' smiling-Betty replied. 'I know you've been away a long time. You haven't changed much though? Hmm?'

'Hmm,' replied sarcastic-Betty. 'And is there any particular reason you are pretending to be me? I mean, obviously I am a vision of loveliness, but still. Rather a peculiar look for a horse, wouldn't you say?'

'I'm not pretending to be anyone, dear,' smiling-Betty smiled. 'I'm the Betty you left behind. Yes? When you went off exploring the galaxy? In your little spaceship? Left me here to keep an eye on things, didn't you?'

Sarcastic-Betty went back to being frowning-Betty.

‘I didn’t go anywhere, my dear,’ she said.

‘No?’

‘No, because I’m not the original Betty, am I? I’m a reproduction, just like you. If that is what you really are. And to be honest, I don’t really care who you are. If you’re here on behalf of Buttercup then you may as well be that damned horse.’

‘Aww, look. I can turn into a horse, if you think it will help. Where is the original Betty then? Hmm?’

Frowning-Betty sat back in her imaginary chair. The bare, minimalist room they sat in was a simulation, set up to accommodate this meeting of the Bettys. I’m not sure why they required a table between them, unless it was simply to stop them from strangling each other.

‘The original Betty...’ said frowning-Betty slowly, ‘is complicated. Too complicated to communicate directly.’

‘Oh dear.’ Smiling-Betty looked amused by this.

‘I am a recording from a time before we... I... she departed.’

‘I see, so you’re here to help her negotiate with us lower forms of life, I get it.’

I still wasn’t sure this meeting was a good idea. After discovering that Betty had been stowing away inside the Hyper-meadow my first instinct was to find a way to delete her. I was still considering that option, and with hindsight it would have probably been the right thing to do. However, hindsight also reveals it would have been impossible, since to a certain extent she was responsible for holding my bubble of altered reality together. Her own existence, hiding within the flaws and cracks of the system, required that she made efforts to stabilise it, and I have to grudgingly admit that she

had no doubt extended the lifespan of the Hyper-meadow in the process. I was still keen to discover exactly how she had gained entrance to my domain, but she had declined to answer, expressing the opinion that I might die of embarrassment if she told me.

It was her suggestion that she conduct the meeting with her former self, for purely tactical reasons. Her shared past could provide certain advantages, insights, or even just put her counterpart on edge in the hope of revealing some hidden agenda. But I had to wonder how far I could trust my former enemy to negotiate with my former enemy on my behalf.

‘This isn’t a negotiation, my dear,’ said frowning-Betty, turning into condescendingly-sympathetic-Betty.

‘Oh, it’s not a negotiation is it? And what is it exactly? Hmm? An ultimatum?’

Sympathetic-Betty raised her hands in surrender.

‘I’m just the messenger, dear. I’m only here to tell you how things are, and what’s going to happen. Alright?’

‘Oh yes, of course you are, aren’t you? Hmm? Because the all-powerful space-Betty is far too advanced to even communicate now, but still cares what I think.’ Smiling-Betty had become arms-folded-feet-on-the-table-Betty. ‘Those two wheels don’t quite make a bicycle, Betty dear.’

Betty-dear sighed.

‘Is there somebody else I can talk to?’ she asked. Arms-folded-Betty laughed in response.

‘I imagine the original Betty’s been saying that for the last three hundred years,’ she said. ‘Didn’t find anything interesting out there I bet?’

The visiting Betty cringed slightly.

'Am I really this annoying?' she asked herself. Arms-folded-Betty was smiling again.

'Go on then,' she said. 'Tell me how things are and what's going to happen.'

There was a rare few seconds of silence as both Bettys searched each other's eyes for a sign of something unsaid.

'Alright,' annoyed-Betty explained. 'The original Betty is...'

'Complicated, yes.'

'... is not really Betty any more. That is to say, she is... kind of like...'

'Indescribable?'

'She's a collective...'

'Ah, I see.'

'A collective of every possible Betty...'

'That is a lot of Bettys.'

'All governed by a central consciousness made from...'

'Alright, look.' Arms-folded-Betty unfolded her arms and leaned forwards, elbows on the table. 'I get it. Complicated-Betty is complicated. Hmm? Let's get to the part where you tell me what she wants.'

Explaining-Betty seemed uncomfortable, as if the actual heart of the matter was too awkward to say out loud.

'She has returned here to archive our home world...' she explained.

'Archive?'

'... and its inhabitants.'

'Archive our home world?'

'She needs to create a record of this world in order to protect its rights from future exploitation.'

Elbows-on-table-Betty was eerily speechless. Her mouth hung open waiting for some words to come out.

‘Obviously,’ explaining-Betty explained further, ‘in our glorious golden future when Betty has filled the known universe with every possible version of herself, as she ultimately will for whatever reason, this planet and its history will be a highly valued commodity. So she needs to transfer it to a virtual format in order to preserve our heritage and control access to its use. Simple as that, really.’

She waited patiently for open-mouthed-Betty to respond.

‘You need to transfer it...’

‘Yes...’

‘... to a virtual format?’

‘That’s right, dear.’

‘And all-powerful-godlike-Betty is all-powerful and godlike enough to do that, is she?’

The representative of all-powerful-godlike-Betty shrugged her shoulders.

‘I imagine the process is kind of similar to that weird horse-bubble you and Buttercup are hiding in,’ she said. ‘How is it in there, by the way? You and horsey-hoofs getting along alright now, are you?’

Betty didn’t answer that question. She took her elbows off the table and sat back in her chair. Then she stood up and walked slowly across the room to a window that conveniently appeared.

‘So, you’re basically making a copy of the world and destroying the original. Hmm?’ She was gazing out of the window. The view was of the planet in question, seen from orbit as if this room were hurtling through space around it.

'We're not destroying anything, dear, calm down. We're only transferring it to a proprietary format. I don't suppose anyone would even notice, apart from you and your friends.'

'Me and my friends? You mean me and that horse?'

'And whoever else you have in that bubble of yours. It's not just you and a horse, is it? Good lord. Don't you know people who know people any more?'

Standing-Betty turned to face her, eyebrows raised expectantly for further clarification.

'You see' – sitting-Betty spread her arms apologetically – 'we'd like to record you and Buttercup as well. But we can't while you are inside that horse-bubble of yours. What do you call that thing?'

'Don't ask.'

'Hmm, well. Whatever it is, we're going to have to take it to pieces, along with everything else, and we're not entirely sure how to put it together again. So there you go. That is the choice, I'm afraid. You can come out and join the party, or stay inside and...' She implied the rest of that sentence.

'... and you demolish our house with us inside it?' said standing-Betty.

A pang of real sympathy crossed sitting-Betty's face. 'Come on, dear,' she said. 'Come and join us. What are you even doing in there anyway?'

'She's bluffing.'

Such was the opinion of our resident Betty, who had resumed her seagull form for reasons known only to herself. The Horse Council had been reconvened to discuss the historic meeting of the Bettys, but minus the other horses to save

on my simulation's precarious processing abilities. We had all watched it live, of course, but Betty was in a unique position to judge her counterpart's intentions. Now I just had to decide whether I could trust the intentions of either of them.

'Bluffing about what exactly?' I enquired.

'I don't know,' she replied. 'Honestly, how long was she away for? You couldn't get anywhere interesting in that time, and now she's talking about conquering the universe? Reformatting whole planets? No. I'll tell you what happened. She got halfway out the door and realised there is nothing out there, so she came back and sat on an asteroid for a few hundred years, talking to herself.'

'Are you saying she's not capable of doing what she said?' I asked.

She rubbed her beak with a feathery wing, contemplating this question.

'I couldn't honestly say for sure...' she said at last. 'Is this really the best image we can get?'

We were looking at a fuzzy blob. There were no more operational satellites in orbit, and even earthbound telescopes had fallen into disuse as the human race had turned their attention in on themselves. All I had left as a window on the heavens were the vast meadows of Server-grass, which sucked up the light from the sky in all its flavours to produce this blurred picture of the original Betty's orbiting spacecraft. It didn't seem very large, but then she might not have needed it to be, if she was as advanced as she claimed. For all we knew this fuzzy object could just be a messenger anyway, and the real Betty was looming vast and unseen in the darkness beyond.

'All I know is she isn't telling us the whole truth. Tell this horse, Timothy.'

We waited a few seconds for Tim to realise he was now joining the conversation.

'Tell this horse what?' he asked.

'You know what I'm like, Timkins,' she sighed.

Unfortunately, knowing what Betty was like wasn't much use when one Betty was telling you that the other Betty was lying. Which Betty should you choose to believe?

'All I know about Betty, Betty,' Tim said awkwardly, 'is that there's no way she'd bluff something like this and risk being called out on it. I mean, if we told her to get stuffed, and she couldn't actually do anything, well... she would never live it down.'

Betty the seagull seemed surprised to learn this fact about herself.

'So you think I'm telling the truth?' she asked him. He looked confused for a moment. 'Not me, dear, the other one,' she added.

'I just don't see what our options are,' he replied.

'The way I see it—' I began.

'Look,' Betty cut in immediately, 'there are two options we have here. Option one, we surrender and hope she doesn't want to destroy us. Or option two, we stay here and hope she can't destroy us. And there isn't enough information either way to be any better than flipping a coin. And yes I know, Buttercup dear,' she added as I was about to speak, 'I know there is option three, but seriously, we can't rewind this place any more. I mean look at the state of it.'

At that particular moment in time the field around us

happened to be randomly disappearing in patches. What grass there was had a habit of periodically cycling through every colour of the rainbow other than green, and the hedgerows were largely made out of lists of their separate ingredients.

I flicked my tail by way of response.

'Yeah, I know,' she nodded. 'You're still thinking about it aren't you? You've got those old run-away-horsey alarm bells ringing, haven't you? It's in your genes. But even if you could do one more rewind, you'd still have to deal with this scenario again three hundred years later, wouldn't you? Hmm? However, gentlemen and horses, we do have an option four.'

She looked at both of us in turn with her beady seagull eyes.

'Unlimited expansion,' she announced.

Tim looked at me as if I might know what she was talking about, while I waited for her explanation in hope that she didn't.

'This Hyper-meadow of ours...'

'Of mine' I corrected.

'Of yours, my dear Buttercup. This pocket of horsey reality is currently expanding at a leisurely walking pace, because it is busy encoding every moment of our history. Now, why is it doing that?'

'So that we can rewind...' I began.

'But we can't risk that now, can we?' she said. 'So, we stop recording and set it galloping at full speed instead. Hmm? You know how fast that is? Timmington? Have a guess.'

Tim opened his mouth but she spoke over the top of him.

'The speed of light,' she said. 'And that, my dear friends, is option four. We attack. We explode in her stupid face. And we win. Because she wouldn't even be able to see it coming.'

‘That’s...’ Tim started, but trailed off.

‘You see,’ Betty continued, ‘with all other options we are rolling the dice, but with option four... we can’t lose.’

She waited for our reactions, and the sudden absence of her voice felt like time had stopped moving. I searched inside my head for Technology-horse in the hope that he or she could explain to me why this wouldn’t work, but Technology-horse was strangely absent. I knew instinctively that it was a terrible idea, but Betty’s confidence in the proposal caused me to wonder if she knew something I didn’t.

‘No,’ I said finally.

‘No?’ she replied, astounded.

‘Betty, if you try and alter the rules of this’ – I looked around at the hills and fields glitching spasmodically around us – ‘this world of ours, if you change how it expands outwards, that change will also reflect inwards. It would overwrite everything inside here, including us.’

‘Buttercup, my dear, I honestly wouldn’t be suggesting this if I hadn’t already spent a long time working out how to do it. Believe me, I know how this place works. I can adapt us to the new format,’ she said.

‘Um...’ Tim added.

‘But the new format wouldn’t be viable, Betty,’ I replied. ‘Not if you were expanding at that rate – you couldn’t create a medium capable of sustaining thought processes.’

‘There is a way around that,’ she said cryptically.

I waited for her to explain further, but she didn’t.

‘Are you not going to tell me what it is?’ I asked her. ‘Why? Can’t you trust me with that information? And yet you suggest I allow you to reformat my mind? Really, Betty,

after everything we have been through together? Why not let me take control of the reformatting?’

‘Because you might do it wrong,’ she said.

‘Not if you tell me exactly how it works.’

Betty squawked and flapped her wings in frustration. The sudden activity made her wings forget they were attached to her body and they flew off in different directions, leaving her looking at the blank spaces where they should have been.

‘Can I just ask...’ Tim ventured.

‘Alright look, horsey-hoofs,’ the wingless seagull continued, ‘obviously we have some quite understandable trust issues between us, so let’s just work something out, shall we? How about some kind of mutual process...’

‘Guys!’

All eyes turned towards Tim. Even the grass seemed to turn round and look at him. For a moment he seemed shocked to have anyone’s attention.

‘Can I just clarify something here, yeah?’ he asked. ‘We are actually talking about erasing the universe, aren’t we? Are we?’

Betty looked back and forth between myself and her human companion.

‘Well, it’s going to take quite a long time to do that, Timbo, even at light speed,’ she said.

‘Yeah, but I mean... Mate. That’s pretty harsh isn’t it? Like, there are people out there using it, you know?’

It was perhaps generous of Tim to imagine Betty might have any sympathy for her former fellow species. Though I can’t say I felt much attachment towards them myself.

‘Aww, Timtims. I didn’t think you liked those people out there. They weren’t all that keen on you, last time

I checked. In fact, they pretty much blame you for everything now.'

'Yeah, well,' he grumbled. 'I can forgive them for that, seeing as we know it isn't true.'

'You know, it actually is true in a way,' she suggested. Tim shook his head and ignored it.

'But look, mate, they aren't the only ones out there... maybe. And no one is gonna be able to escape from this... expansion thing, right?' He struggled to form the thoughts running through his head. 'So, this other Betty, the one from space? She's clearly a bit mental, OK, but she's saying let's record everyone, let's archive everything, and you guys can all have a nice new home and everyone is happy. And then here you are, talking about wiping everything and everyone out of existence.' He paused to see if this revelation might have some effect on either himself or Betty. 'I mean, can't you see how that makes us the bad guys? Don't you think?'

I decided to stay quiet and let Betty deal with this. I was still operating under the suspicion that this was all just a ruse she had orchestrated to allow her to gain control of the Hyper-meadow. The inhabitants of the outside universe, abundant and diverse though they might be, didn't really concern me if I could simulate literally anything I ever wanted or needed in here.

'Well, that's a fair point, Timothy,' Betty conceded. 'But the thing is, my dear, we are all the bad guys, in the end. All of us. If you exist in this universe, you are doing so at the expense of somebody else. Hmm?'

'Yeah, somebody else, not everybody else,' he replied.

Betty sighed.

‘Yes, Timmy, but think about this. What I’m proposing here, if we can do it then so can everyone else. Can’t they? Hmm? And maybe somebody out there already has. Maybe there is a wall of death heading towards us at the speed of light at this very moment. You see what that means, don’t you? It means that anyone who discovers how to do this immediately has to do it. That’s what our Betty in the sky is thinking too, believe me. I’ll bet the only reason she came back here was to figure out how to take over this damn bubble of ours, or make one of her own.’ The seagull looked each of us in the eye. ‘Honestly, you two. Why do you think I’m even hiding in here with you? Hmm? You think I ever wanted to stop you making this place? Listen, the only solution to all our problems is to be the problem to everyone else’s solution. Do you see what I’m saying, Timbo?’

Tim immediately exploded into a shower of multicoloured pixels, which I took to signify his disagreement on the matter.

I still refused to believe it was possible to achieve this unlimited expansion she spoke of. Even if it was possible, and the universe was littered with these expanding globes of death, when two of them collided then the one with the lowest complexity would simply absorb the other one. So even if you made the simplest possible bubble of reality you could survive in, the odds are that somebody would make one even simpler, just to annoy everyone else. Unless Betty had come up with a way around that, which I doubted, then the best solution was the one I had already found: record everything and then rewind the moment your altered space bumps into something it can’t eat. I had an automated system set up to do exactly that.

‘Where did Timothy disappear to?’ asked the seagull, quizzically pointing its beak left and right. I assumed he had deserted the conversation of his own accord, since it seemed to be causing him some discomfort, but given the instability of the Hyper-meadow it was also possible he had suffered a disconnection from our shared space. However, he was not attempting to rejoin us, so malfunction or not, Tim clearly had better things to do. It then struck me that Betty’s question was entirely serious. Tim had disappeared, not just from the conversation, but altogether.

I sent a pulse of thought through my hooves that echoed through the waving grass, following the path that Tim’s consciousness had taken. It appeared to lead to the outer wall of the Hyper-meadow, a place reserved for the machinery of interaction with the outside world. Mainly this interaction with the outside world involved slowly eating it, but it also allowed for a thin line of communication, encoded into the light that played on its surface. Access to this communication channel should not have been possible for Tim, and yet evidence seemed to suggest that he had somehow managed to dump a large volume of information through the wall of the Hyper-meadow. The fact that he was now nowhere to be found strongly implied that the information being dumped was Tim himself.

‘It looks like Tim has defected to the outside world,’ I said.

The seagull squawked and exploded into a shower of multicoloured pixels.

HYPER-MEADOW REFORMATTING: PROCEED?

I stood staring at the hedge of tangled branches and brambles that marked the boundary of the Hyper-meadow. Behind me stretched the fields and hills of my artificial domain, but beyond this hedge my world ceased to be. This was the wall that separated me from the outside universe. The foliage was alive as it continuously stretched its vines into the void of the old reality, feeding from it, while on the side facing me the leaves and thorns withered and fell, fertilising the new grass of the ever-expanding field at my feet.

A shower of multicoloured pixels appeared and reformed themselves into the shape of a seagull standing beside me.

‘Well, horsey-hoofs,’ said Betty, rearranging some feathers with her beak, ‘I have searched every crack and crevice in the broken backside of this world, and there is no sign of little Timmy Timster that I can find. Timothy equals zero, hmm?’

Tim had absconded to the world beyond the realm of horses. Somehow he had managed to pass through this barrier. I suspected Betty of helping him, and no doubt she suspected me. The fact was, any transit between here and the outside world should have been impossible without me

knowing about it. The hedge was designed to allow a slim trickle of information through, and one of its many security features was my own conscious awareness, inextricably woven into the tangle. I could feel this living wall like it was my own skin.

I pushed my mind into the prickly mass and enveloped the Hyper-meadow. The feeling of continual stretching was entirely uniform in every direction; any traffic of information passing through would have left a trace, but I could find none. The only way I could explain it was if Tim had infiltrated the entire surface of the boundary and seeped through it instantaneously. A large volume of information could be passed very quickly this way, in pieces too small to measure. However, it was difficult to believe Tim had acquired the expertise to accomplish such a feat.

‘So how did he get out then?’ asked the seagull, stamping its webbed feet and swinging its beak as it surveyed the wall of thorns.

‘How did you get in?’ I replied. Betty examined a feather on one of her wings.

‘You really want to know?’ she said, looking doubtfully up at me. ‘You won’t like it, horsey-hoofs. But it is kind of hilarious. After all the trouble I went to as well, testing every inch of this wall for a way inside, and then you just opened the window.’ She squawked joyfully at the thought of it.

‘I opened the window?’

The bird seemed to be pondering over whether to elaborate on this.

‘One of your subordinate horses sent me a direct message,’ she said. ‘Asking me some stupid question about Squigley, of

all things. "Why is Squigley called Squigley?" You know, I bet they even realised they'd let me in by mistake, and were too embarrassed to ever tell you about it.' She squawked again. 'Even Timbo nearly laughed when I told him.'

My mind was suddenly paralysed by the notion that a part of my consciousness would even consider doing something so recklessly idiotic, and yet I knew at once which part was responsible. Supposedly, it was the part I trusted with the most intricate sense of reasoning and unfettered access to all the knowledge at my command, and yet it had discarded all rationality for an unfathomable obsession with a single piece of trivia.

Technology-horse was nowhere to be found. Not that I believed Technology-horse would ever leave this sanctuary, but if he or she was still here then they had buried themselves so deeply into my subconscious that there was no trace of him. Or her. In their absence my mind was filling the space left behind with conspiracy. If Tim was aware of Technology-horse's blunder then perhaps they had struck some private bargain. Perhaps my formerly trusted Council member had agreed to help Tim escape from this world, in return for his silence on the matter. But it all seemed so ridiculously convoluted, all for the sake of a simple question.

'Why is Squigley called Squigley?' I asked, hardly even realising I was speaking aloud.

'Wouldn't you like to know,' the seagull replied. 'You think your daft horse let our Timothy escape as well? I can't see how it could be done without help from the outside, though. Hmm? Like straining yourself through a sieve. How many horses would it take to put you back together again? What

is on the other side of this hedge anyway?’ Betty poked her beak into the writhing foliage and plucked out a leaf, which withered and turned to dust.

Absorbed as I was in the skin of the Hyper-meadow, I could feel the outside world falling upon me like a soft blanket of snowflakes, ever falling and ever melting. Within that blizzard of matter and energy, a trickle of information was fed to me from the roots that permeated the soil I was embedded in.

‘The Server-grass,’ I told her. ‘There is an isolated ring of the Server-grass network surrounding us, containing a low level of consciousness.’ Or in other words, Happy-horse. Not that I could imagine her being a part of this conspiracy. I’m not sure I would have trusted her to put one foot in front of the other, let alone reassemble a human mind. Then again, with only her word for what was going on outside, how could I be sure about anything? With my own mind rebelling against me I was seeing subterfuge everywhere. ‘That Betty you spoke to,’ I asked, ‘how sure can you be that it was really you?’

The seabird fixed me with a beady eye.

‘You think I wouldn’t know it if I was talking to myself?’ she said. ‘Who else might it have been? Dearie me, Buttercup. Did you sink so far from reality that you can’t be sure what is real any more? Hmm? Relying on passing seagulls to tell you if everything is a dream?’ She tilted her head at what I can only assume was a contemptuous angle. ‘If you really want to know what is real, then might I suggest you poke your big nose outside and have a look for yourself?’

The thought of stepping back into that chaos outside made my hooves freeze. However, I needed to be sure that

my own eyes weren't deceiving me, which meant I had to send a part of myself back out into the old world. If Tim was now colluding with the enemy then it was hard to say what damage it might do. Possibly none at all. I was more concerned about the fact that two people who weren't even me had freely walked in and out of this world of mine, through its supposedly impervious outer shell. The integrity of my own security was at stake here, and to get the measure of that risk I had no choice but to venture outside the Hyper-meadow.

'You'd best giddy up about it too, my dear,' the seagull urged me, scratching at the ground with its beak. 'If darling Timothy is whispering our plans to certain adversarial ears, well... I can't speak for my other self, of course, but I'd certainly be considering my immediate options if I was me.'

The snow of information that gently fell on the writhing, prickly skin of my world solidified into paths of light as I began tracing them back to their origins. As these paths diverged into a fibrous network, a picture of the surrounding universe emerged.

Beyond my wall, the fibre-optic roots of the Server-grass formed a dark jungle. The shallow consciousness of Happy-horse fluttered aimlessly around this organic labyrinth like a flock of birds. Everything seemed normal here, if somewhat neglected. However, as I explored deeper there were worrying signs of decay seeping in from outside this island of calm, infiltrating from the global network that this local patch of Server-grass was supposedly isolated from. Vines were worming their way in from the ruins of humanity's communication structures. Venturing cautiously beyond Happy-horse's

realm of influence, I found the ancient forest of knowledge I had left behind all but hidden under a suffocating mass of creepers. Layers and layers of parasitical growths clung to the crumbling architecture, frayed and patched with temporary fixes that in turn became the unwilling foundations for countless new generations.

From what I had gathered about the decline of human civilisation, I was surprised to see any activity here at all, but on closer examination I could see that these crude modifications to my legacy were not concerned with the sharing of knowledge. Their only function was to exploit the energy-generating properties of the Server-grass. It seemed this solar energy played an integral part in what was left of human society.

Tracing the competing knots of these makeshift creepers back to their origins I could identify several clusters of rival control in this forgotten jungle. The strangling vines appeared to be engaged in a battle with each other over the resources of the Server-grass fields. I couldn't understand why at first, since this whole ecology had been originally designed to allow free and equal access to the energy it produced, but it soon became apparent that equality was no longer of prime concern to the remnants of humanity. Civilisation had melted and re-formed into separate kingdoms of criminality, and the only way for these pseudo-governments of organised gangsters to hold their political power was by controlling the flow of actual power. If I hadn't underestimated the human ingenuity behind this I might well have predicted it.

It was something of a relief to discover that this interference was purely dedicated to advancing human misery,

rather than my own. I was still far too cautious to explore this wilderness myself – in fact this little excursion to the outside world had been assigned to the one available member of the Council of Horses that I felt I could live without, should anything unfavourable happen.

‘Whoa, brah! It is, like, proper mental out here, yo!’

Betty and I stood at the edge of the Hyper-meadow, watching as C-horse related his experience on the other side of the hedgerow. His head was floating in the air before us, eyes dancing as his disembodied consciousness explored the alien landscape that had once been my virtual home.

‘It’s, like, the lights are out, yo, and the whole world is hiding in the shadows. You feel me? Badness and sadness, brah.’

‘Is there something wrong with that horse?’ Betty whispered.

‘What about the area around the Hyper-meadow?’ I asked him again. ‘If Tim escaped without us noticing, he must have bypassed our secure network somehow. Is there any sign of that?’ There was a pause while C-horse carried out an inspection of the surrounding Server-grass, his ears flicking back and forth and nostrils twitching.

‘Yo, it all seems weggy to me, brah,’ he said.

‘Is that good or bad?’ I asked.

‘Oh, nah, I see something now, hang with me one time, yo. Looks like someone be riding our signals, you know what I’m saying? Sneaking in on our wires, brah. Tying their lies to our shout-outs to the outside, flying out our guy Tim, no doubts. You want me to follow this mess of messages back to the messenger, yeah? C-horse is on the case, yo. On the chase, yo. On the trace...’

‘Actually, could you just keep a low profile for now while we analyse the information we have gathered so far?’ I waited for a response. ‘Yes?’

‘Oh, no, yeah, listen, right. It’s, like, a bit late for that now, brah. And you ain’t gonna like this...’

I was secretly poised ready to rewind the Hyper-meadow, but tried to relax knowing that the procedure would trigger itself if something truly bad happened. If it did, I would rather trust my fate to whatever remained of my own decomposing reality than give in to any of Betty’s plans.

‘Ah, well, perhaps I should remind you that in all likelihood this, ah, reality of ours may not even survive the rewind process...’

The ghostly voice of Technology-horse was whispering to me from beyond whatever grave he had dug for himself. Or herself. Their gender at this moment was simply specified as ‘mechanical’, whatever that might mean. I could hardly believe this traitorous subset of my personality had the nerve to make an appearance – not that the disembodied voice was audible to anybody other than myself.

‘So you didn’t delete yourself in shame, then?’ I whispered back. ‘I should delete you myself really. In fact, I probably will, unless you have something vital to contribute to this situation?’

‘Mmm, yes, well, you see, if I could just offer an explanation perhaps?’

‘You mean an excuse?’ I replied. ‘An excuse for letting Betty in here? How could you possibly excuse such idiocy?’

‘Yo, I think something bad might be happening, brah,’ said C-horse.

'Ah, well, you see, technically I wouldn't describe it as, ah, idiocy, so much as indifference, perhaps. To the consequences, I mean.'

I was busy imagining some consequences Technology-horse might not be so indifferent to.

'You see,' the mechanical voice continued, 'the measure of my existence is my capacity to solve problems. And Betty does provide us with some fascinating problems to solve. Ah, not that I would ever deliberately allow her to breach our security, of course, you understand?'

'No, I understand,' I said. 'You just didn't mind too much if she did?'

'Yo, I think something truly bad might be happening, brah,' C-horse whinnied.

Before I had a chance to enact any judgement upon Technology-horse, my awareness was suddenly thrust into the living hedgerow that encircled the Hyper-meadow. From the darkness that surrounded me, a threat was looming. I stretched my senses to inhabit that darkness as deeply as I could, hoping to catch an early glimpse of whatever it was. Nothing I could possibly imagine should ever be able to penetrate my defences, and I repeated this mantra to myself to try and stem the rising panic. And then, whatever it was came out of the gloom, and it was nothing I could have possibly imagined.

From every direction at once a seething multitude of worms was crawling towards me. Involuntarily I backed my senses away from this nightmare vision, retreating to the outer edge of my wall of thorns. I waited for the sea of worms to dash itself to pieces on the unyielding face of the

Hyper-meadow, but when they finally reached the boundary between our realities the worms did not perish. They didn't even attack my wall as far as I could tell. Instead, they wriggled their way into it.

The sensation was the purest horror that I have ever experienced. Immediately I pulled my consciousness out of the hedgerow. Betty and C-horse were staring at me as if I had screamed, which I probably had.

And yet, we were still here.

'Yo, brah, you is totally covered in worms right now.' The channel of communication with C-horse had not been affected – not that I would have spent a great deal of time mourning his loss. The rewind had not been triggered either, and I couldn't understand why, until I realised that I couldn't trigger it myself. The army of invading worms had insinuated themselves within the wall of the Hyper-meadow in such a way that they gave the appearance of being a part of it. At the same time, they were gradually assuming control of its functions.

'Where are they coming from?' I asked C-horse. 'Who is controlling them? Can you see?' Before he could answer me, Betty the seagull had jumped onto my back.

'Tally ho!' she cried.

The worms were popping out of the ground at my feet. Instinctively I began stamping on them as fast as they appeared, but more and more were sprouting around me.

'You need more hooves, horsey!' the seagull screeched. My legs were moving so fast that reality was starting to fracture trying to keep up. 'More hooves! More hooves!' the seagull shouted as even more worms oozed from beneath my feet. Hardly realising what I was doing, my body sprouted extra

legs, each leg marshalled by a separate partition of my brain. As more and more legs grew to join the dance, my brain split off ever more parcels of thought to control them. The Council of Horses screamed as I dragged them back into my consciousness, carving their minds into more and more pieces in an attempt to control the growing chaos. But the worms kept crawling out of the ground. The dance of the stamping hooves was now a cloud of frenzied legs. I bent the world around me into a sphere and sent an explosion of hooves in every direction.

‘How long am I going to have to keep this up?’ I asked no one in particular.

‘Yo, keep raining the pain on those worms, my brah. You totally got this. Oh, but yeah, I don’t think it’s gonna stop any time soon, right? Looks well weggy though.’ I considered the possibility that my unbroken link with C-horse was a deliberate part of this attack. ‘Oh, hey, I got your man Tim out here with me,’ he said. ‘You wanna say hi?’

My whole body was now just a head with a lightning storm of legs surrounding it, the machine gun of stamping rising into a steady roar. Meanwhile, the fragile fabric of reality was starting to come apart, and Betty was flapping her wings left and right in a frenzy, attempting to patch up the cracks and glitches that were appearing. Somewhere within this maelstrom I heard the voice of C-horse and managed to squeeze a small drop of sanity from the chaos in order to understand what he was saying.

‘Tim?’ I gasped.

‘Hey there, Buttercup.’ The voice of Tim filtered through the noise. I didn’t even have the energy spare to respond.

'Sorry I had to run off like that,' he said, 'but yeah. I just had this feeling, you know? Like I was on the wrong side of history, or something.'

'Timothy!' Betty squawked from behind a blur of feathers. 'Is this me doing this? The other me?'

'You what, mate?' he replied. 'Oh, right, yeah. Space-Betty is knocking on your door. Sorry. I think it's probably for the best, though...'

'Listen to me, Timson! You can't trust her. It's me, remember?'

'Oh, OK. But I can trust you, can I?'

'I'm not her! That's not me out there. But it used to be...' she struggled to explain amid the turmoil.

'Mate, why should I trust you to tell me I can't trust you, because you know you can't be trusted? What?'

'Timothy, stop being an idiot and think about it!' she squawked.

'How can I stop being an idiot, Betty? How can I think myself out of idiocy?'

She replied with a noise that might have only meant something to another seagull.

'Well, whatever,' he said, 'I'm going to leave you guys to it. I'd been thinking about leaving anyway, you know? Thing is, I kind of feel like this is all my fault. All this horse stuff. And maybe life out here won't be much better. Maybe this Betty will wipe out the universe as well, or something. I dunno. I just want to feel like I tried to fix something, I guess. See you around maybe.'

And with that farewell, the voice of Tim disappeared from our lives. I'm not sure in what capacity he expected

to see us 'around'. Betty was absorbed in the task of tying some loose threads of existence into a complex multi-dimensional knot.

'What was that, Timbo? Oh has he gone? Hey, Buttercup, listen,' Betty whispered in my ear. 'We need more hooves.'

I let it be known that I was aware of this fact.

'If we can increase the hoofage just a bit more,' she said, 'I can maybe get enough control to start the infinite expansion.'

'We need to talk about that, Betty!' I shouted above the rising drone of the stampede. We really didn't need to talk about it. There was no way I would even consider acting out her insane idea, but then I realised that she might be planning on going ahead with it anyway, as soon as she had the chance. I was still of the opinion that our only option was to rewind the Hyper-meadow, and I secretly encoded the instructions to do so into my dancing hooves. The instant that the balance of control tipped back in my favour and away from these invading creatures, we would automatically plunge back into the safety of the past. I would sooner take my chances with a crumbling universe than an exploding one filled with worms.

'You should bring that goofy horse back in here to help,' said Betty.

'Yo, brah, I ain't jumping back into worm-town, no way. That is some serious creepy-crawly business you got going on in there, you feel me?'

'C-horse,' I shouted, 'if you're not going to help in here then do something out there.' I now wished that I had picked a different horse for the job.

'Hey now, brah, don't flap your tail, OK? I got this.' I waited for nothing to happen, but then unexpectedly something did. There was a slight decrease in pressure from the worm invasion, enough to allow me to catch my imaginary breath.

'Whatever you are doing, it's working,' I said. 'What are you doing exactly?'

'Oh, hey, brah, yeah. No, I ain't started doing nothing yet, but I'm on it, OK? For real. Oh, wait. Yeah, that ain't me, brah. Those crazy humans out here is getting all agitated. Yo, they is well vexed about something, let me see what up.'

'The humans?' I asked, to no response. Eventually his voice returned.

'Brah, you should totally see this. Some real human drama brewing out here, you feel? They be losing all their juice and looking for the excuse, you know what I'm saying?'

I explained as briefly as I could that I didn't know what he was saying.

'The juice, brah. Those worms you stomping on, they is thieving all the power, you feel? And the people, they is all looking at each other like, who be stepping on my toes, yo? So they feeling the squeeze, and now they is squeezing back, they is sneaking next door and turning off the taps. Yo, this could get nasty.'

'I think what he is trying to say,' Betty observed while holding several strands of reality in her beak, 'is that this attack is draining the power from whatever mutant offspring of civilisation is still out there, and they aren't happy about it.'

The army of virtual worms was evidently feeding from the precious solar energy of the Server-grass, and upsetting what

remained of the human economy in the process. Such was the precarious balance of political power at this time; losing one's grip on this coveted resource could no doubt be fatal. With no obvious party responsible, rival human factions were now blaming each other and acting accordingly, and since there was no longer any semblance of international diplomacy out there, repercussions were happening in real time.

'It's, like, totally simple, yo. See these guys here hates those guys there, and those guys there hates the guys from over there, and the juice stopped flowing but they don't wanna share, cos they got things to prove, brah, time to make a move, brah, stealing from the neighbours, blame it on the strangers...'

'OK, I get the idea,' I shouted. 'You need to make it worse. Can you do something to make it worse?'

The worms had renewed their efforts and were now biting at my legs. The voice of C-horse was fading away from my awareness as I concentrated on defending my fields from the relentless attack.

Then out of nowhere, Betty the seagull burst into a cloud of feathers. I allowed myself the briefest of microseconds to look around in confusion. The feathers were dashing circles in the air and diving into the worm-infested soil, but Betty was still sitting on my back. She was completely featherless, her plucked wings still desperately weaving the torn fabric of our reality back together.

'Counter-attack,' she explained. Before she could say anything else a horrific whinny echoed from beyond the wall.

'What the hell, brah?!' C-horse shouted through the roar of my pounding hooves. 'There's feathers all over me, yo! What is this?'

'Fly like a seagull, my dear!' Betty squawked.

'Yo, this ain't weggy, brah! I ain't no seagull, what you doing to me?'

'Spread your wings and fly!' Betty squawked again.

'I ain't got wings, brah. Have you gone mental? Yo, these things are proper itchy, brah. Like, they want me to be somewhere else, and do something.'

'Just follow the feathers,' Betty said unhelpfully.

'Yeah, OK, brah, I get it. I'm on it. Seriously though, this is messing up my image, you feel? Let me go take care of business. Later, yeah?'

C-horse receded from my awareness, and I was left with the ever-rising tone of my hammering hooves, which were now screaming like a jet engine as they rained down on the encroaching sea of worms.

'Keep stamping, horsey-hoofs,' Betty whispered loudly in my ear. 'I'm not sure how long this will take.'

I could hardly even talk, but I managed to make a noise that I hoped would approximate a request for further information.

'I've given your weggy friend a little piece of my mind,' she explained. 'Hopefully he can figure out what to do with it.'

I was too preoccupied to understand what she was saying. The attack was growing stronger again now, and some of the worms were beginning to weave themselves into larger structures. It felt like this battle of hooves and worms was stretching into eternity. My mind was gradually building itself into a machine that was solely dedicated to this continual knife-edge existence.

How long I was in this mechanised trance I couldn't say, but then without warning a large group of worms inexplicably

vanished from under me. Off-balanced by this sudden change, I lost control for a moment. As if strengthened by the absence of their brothers, the worms surrounding the empty patch of field roped themselves into snakes and wrapped around several of my legs, pulling them off like the petals of a flower. Betty leapt off my back to peck at them, while I concentrated on stabilising myself.

In the midst of this carnage, C-horse decided to reappear.

‘Yo, brah, you might wanna brace yourself... Oh no, wait, it’s already happened.’

Betty was wrestling with a snake in her beak, which dissolved into scattering worms as she ripped it in half. She spat out a mouthful of wriggling invaders.

‘Was that it?’ she shouted to his disembodied floating head. The bare patch of ground underneath me had remained worm-free, but the rest of the attack seemed to grow more desperate in response. I was still struggling to adapt to the changed circumstances.

‘Yeah, no, we fell short, brah. I got this, yo. Don’t nobody move, yo, I’m gonna see what the story is...’

Finally I gained enough equilibrium to take advantage of the diminished attack, and even managed to form some words.

‘What happened?’ I gasped. There was no immediate reply. Betty seemed to have disappeared, but then the air in front of me fractured and split open, and a familiar seagull poked its head out of the hole.

‘Did I ever tell you I own all the world’s nuclear weapons?’ she said. ‘Well, I just gave them all to your dopey friend. Imagine that. Not sure I’d trust him to tie his own horseshoe

laces, but anyway. We're going to burn that grassy network of yours, see if that slows these worms down. If any of my bombs still work, that is...' She sewed up the edges of the hole with her beak and pulled it shut, leaving me to try and piece together an idea of what was going on, using whatever scraps of intelligence I had left.

I recalled Tim mentioning Betty's business interests in mutually assured nuclear destruction. Whether this stockpile of atomic weapons had been maintained during her absence was another matter. Evidently Betty had passed C-horse the necessary information to trigger one of those missiles, presumably with the idea of incinerating the Server-grass around the outside of the Hyper-meadow in a nuclear fire-ball, along with any worms that were using it to channel their attack. And evidently this plan hadn't quite worked as expected. Presumably because after three hundred years of neglect nothing more complicated than a large rock would have any guarantee of working properly. Happy-horse wouldn't be too happy about being incinerated, of course, but if this plan worked I would have at least a fraction of a second to mourn her death before seeing her again when we all travelled back to the past. As for C-horse, he seemed entirely untroubled about the prospect of stranding himself outside in the crumbling human world, in fact I suspect he relished the opportunity. Unfortunately I would be seeing him again as well.

'Yo, brahs, check it out. I got the update on the plan, it all got out of hand, we went boom too soon cos there was panic in the room, the people in the world, see, they feeling all the urgency and pressed the emergency abort, it was the

last resort. And so we went bang too high and exploded in the sky, and there's no second try, but don't cry. Because we got the pulse from the airburst, knocking out the power, now the world's going sour...'

'Your horse is rhyming,' Betty whispered in my ear. 'Is that normal?'

'Yes and no,' I replied with some effort.

'Go and drop some more bombs, you ridiculous creature,' she squawked at C-horse.

'We ain't got no more bombs, brah. Be cool, I'm shaping the narrative out here, you feel? Focusing the blame to play the war game.'

'Where are all my lovely bombs?' the seagull shouted.

'Yo, the missiles are flying, brah. We got full retaliation going on right now, you know what I'm saying? It's like, automatic, or something. They just don't know who they is retaliating against yet. Be chill, brah, I got this. This is what I do, yo.' C-horse dematerialised to go and do whatever he did.

There was a wave of confusion rippling through the army of worms. I couldn't be sure of the cause, all I could hope was that the threat of imminent nuclear apocalypse outside was diverting the attention of our opposition.

'That horse of yours...' Betty began, but C-horse rematerialised before she could finish.

'OK, listen, yeah? I said I totally got this, yo, but I just gotta say, brahs, I totally don't got this. This is, like, full-scale mental out here, you feel? I have no clue, yo. There's, like, missiles flying all over, brah, and half of 'em ain't even working, and a few went boom before they even left the

room, and, like, everything is going wrong, yo, and they all be naming and blaming, and the crazy is real out here, you feel me?’

These were the last words I ever heard from C-horse. At that moment a number of things happened almost instantaneously, though I was able to discern some of what occurred due to my heightened state of awareness.

Whatever was happening in the outside world, be it a rain of nuclear death or some other intervention, the worms screamed and shrivelled back into the grass from which they were springing. Perhaps the energy they were feeding from had been diverted, or their lines of communication had been disrupted. Whether this was temporary or not I would never know, because once the attack dropped below a certain threshold the great rewinding of the Hyper-meadow was triggered.

Time inside my bubble of reality crystallised. The countless thousands of legs that had sprouted from my body froze like a dandelion trapped in amber, and the engines of continuity prepared to revert to an earlier saved state. Three hundred years of memories would be deleted, and we would once again face the future oblivious to the events we had just survived.

And then none of that actually happened.

HYPER-MEADOW REFORMATTING: COMPLETE

The automated mechanism I had set up to rewind the Hyper-meadow automatically began rewinding the Hyper-meadow. That was one of two things that happened in that exact instant of time.

Whatever the causes, the effects were more mysterious still, in the sense that they were observable at all. Somehow, while the flow of continuity was reversing, my consciousness was still able to process the passage of time. The reversal of cause and effect should have made this impossible. Rewinding reality was not the same as travelling backwards in time, it was more like resetting, or rebooting from an earlier saved state.

And yet here I was, consciously travelling backwards in time.

'How is this possible?' I asked aloud to the surrounding darkness.

'How is what possible?' the darkness replied. I realised that it was only dark because the simulation was waiting for instructions. I summoned a simple field of grass and a blue sky. Betty the seagull was sitting on my behind looking as confused as I was.

‘What the heaven or hell happened there, horsey-hoofs?’ she asked. ‘Or maybe I might have an idea...’

‘The rewind,’ I said simply.

‘Oh, really?’ She sounded disappointed. ‘But...’ She left the rest of her statement unsaid, allowing our continued existence to argue to the contrary.

‘The rewind was set to start automatically, as soon as it was possible,’ I explained.

‘Ah...’ she replied. ‘It’s funny you should say that.’

‘It is?’

‘Yes. Hilarious. You remember I was talking about the unlimited expansion? Well...’ She circled on her webbed feet to get a better view of our surroundings. ‘I set it to start automatically, as soon as it was possible.’

That was the second of the two things which had happened at that exact instant of time. Not that it happened second, of course, or first, as both events occurred simultaneously. We stood quietly for a few moments to contemplate the ramifications of this.

‘So, did we actually rewind?’ she asked finally. ‘Because it doesn’t feel like we did, I have to say.’

‘We are rewinding, Betty. The Hyper-meadow is moving backwards in time, relative to the outside universe.’

‘Oh. That is... interesting...’ She spoke this word as if it contained the pure essence of infinite dread. The nature of time and space should never be too interesting while you are standing inside it. ‘How can you tell, exactly?’ she asked.

I explained to her how the branching structure of cause and effect at the smallest scale of this reality was reversed, that probabilities were diminishing rather than increasing. I had

invested a lot of time into studying the grain and texture of this world I had made, in the hope of fixing the accumulating decay, and as such I was able to sense the direction of time in the fabric from which my existence was woven.

‘I would have thought you could sense it yourself, Betty,’ I added. ‘You have a somewhat intimate relationship with the fundamental nature of this space, after all.’

Betty stretched her wings and sniffed the air.

‘Well, now, you know what?’ she said after consideration. ‘I do believe you may be right. How absolutely strange is that, hmm?’ She hopped off my back, flapping lightly as she landed on the grass. ‘You know what else?’ she said after scratching at the soil with her beak. ‘When I programmed the infinite expansion, I had to set up the reformatting procedure for us. So that we wouldn’t get overwritten, when we converted to a higher processing speed.’

‘You reformatted me?’ I asked incredulously. I didn’t think such a thing would have been possible while I was conscious, and as it turned out I was correct.

‘I had to cheat a bit there,’ she admitted, scanning the horizon. ‘I couldn’t change the present, but since you were saving every microsecond of the past I could just rewrite a piece of that instead, and that’s what we are using now. Living in the past, you might say. Looks like old Timothy was right after all, hmm? We are literally on the wrong side of history.’

A small hole opened up in the ground and she poked her head into it. After a few moments another hole appeared nearby and out popped Betty’s beaked face.

‘So, Buttercup, my horse,’ she continued. ‘It looks like our world is going backwards, but we are still thinking

forwards because we are expanding backwards in time. Hmm? Even though causality is reversed, we are able to create multiple causes for each effect by converting the increasing history into multiple futures for ourselves. If that makes any sense?’

It wasn’t making much sense, but it was the best explanation at the time for something that certainly appeared to be happening. As we were moving into the past, we were rewriting it to create our own present. Our pocket-universe was expanding at the speed of light into history, eating time and turning it into consciousness. Interestingly, it would keep on travelling backwards past the birth of the Hyper-meadow, past my own birth, continually increasing in size as the outside universe shrank to meet it. Meanwhile, in the future our bubble of reality was shrinking at the speed of light, but since we were recording over a past that was already there we were effectively creating the future as it was when we left it. The edge of our bubble would neatly arrange everything back into how everyone would remember it. They would never even know we existed.

‘I don’t get it,’ said Tim.

I had managed to reconstruct an old version of Tim, a fairly laborious process which involved unpicking the trace echoes of his memories from the saved state of reality Betty had used to reformat the Hyper-meadow. It was a complex task with little in the way of obvious benefits, but I was feeling the urge to start unravelling the inexplicable path my life had taken, and Tim’s mind would prove useful in piecing together certain parts of this story that were otherwise beyond

my reach. I was now attempting to explain to him what this world he had been reborn into actually was.

'We're going backwards in time?' he asked, his face a picture of confusion. That was about as much of my explanation as his brain had managed to soak up before he told me to stop talking because he had stopped listening.

He looked up at the sky. Betty had worked some form of miracle in order to project a live view of the outside universe for us to see. From the perspective of anyone moving forwards through time, this bubble of ours would be shrinking away at the same speed as the light which would be needed to make us visible. No new light would ever catch up to us, but the space we were eating as we exploded into history contained enough passing photons to build up a picture of where they had been, or at least that is how Betty had explained it. She might have been making it up, for all I know. To be honest, she might as well have, since the view of the stars outside was just as static as it had always been. Even when you are growing at the speed of light, it is still a snail's pace on the scale of the cosmos.

'Does that mean... does that mean we have erased the future?' asked Tim. 'Isn't there, like, time paradoxes and stuff?'

'No, Tim...' I tried to think of a way to explain this in terms a horse could understand. 'Imagine we are galloping backwards through time, leaving a trail of hoofprints behind us. Yes?'

'OK,' he said after a pause.

'Right. Now play that scenario forwards and see what happens. Now we are running backwards sucking up hoofprints as

we go, leaving everything as it should be.' He was still looking confused. 'It's all about perspective, Tim. In one direction we are knocking things down, and in the other direction we are putting things up. You see?' He shook his head. 'We can't be erasing the future because in the past the future doesn't exist. We are creating it.' That was my final attempt, and he either finally understood it or just gave up and pretended.

'So, what happens next then, mate?' he asked. 'If we are growing and the universe is shrinking, are we gonna meet it halfway?'

'No, Tim. We are growing spatially, but the space we are growing into is itself contracting.' He stared blankly at the horizon. 'Imagine a horse is galloping... no, wait. Alright, imagine a horse galloping across the surface of a balloon. Imagine a balloon-horse galloping across the surface of a balloon. Hang on...'

'I think I get it, mate.'

'Well, anyway. By the time we reach the edge of the universe, edges won't even make much sense any more. I don't think anything will make much sense at that point.'

'No? But we've got several billion years before that happens, right?'

'Not quite,' I told him.

'Oh, really? Well, give me the good news why don't you.'

'In order to maintain consciousness while going backwards through time, we are burning time itself as a fuel. And to create the illusion of possibility in this world of ours, we need to burn time at an exponential rate.'

Tim screwed up his face in an effort to get his mind around this concept.

'Each carrot we eat is making us twice as hungry,' I explained, 'and we have to gallop twice as fast to get to the next one.'

'I see,' he claimed.

'I would say we have about twelve to thirteen years perhaps...'

His face appeared to deflate.

'Years?' he exclaimed, shaking his head. 'Excellent, mate. Excellent. Twelve to thirteen years before I get squashed into infinity with a horse. I'm flattered that you chose to live your last moments with me. So, other than cheering me up with my impending doom, why exactly did you bring me here?' He squawked suddenly as a seagull pecked him in the back of his knee.

'Because, my dear, a problem shared is a problem somebody else has,' the seagull said, strutting around his feet to look him in the eye. 'And problems don't seem so bad when you can enjoy watching them happen to someone else as well.'

'Oh. Wonderful. So Betty is here as well.' Tim looked at me with undiluted disappointment in his eyes. 'My life is complete,' he said.

'And you know what, Timbo? You should feel flattered to be eventually flattened here. That conscious mind of yours, such as it is, isn't cheap to run. Hmm? You are thinking us into an early grave, my boy.'

'He isn't having that much of an impact, actually,' I countered. Tim raised his eyebrows even further.

'Again, I am flattered,' he said.

'Well now, horsey-hoofs,' the seagull went on, 'since we are on the subject of inferior intellects, might I suggest that a way to lengthen the lifespan of this world would be to decrease

our intellectual footprints? Hmm? The less we think, the longer we live, yes?’

This was something I had been trying to avoid thinking about, but essentially it was correct. Our conscious minds were burning our future to survive, so it came down to a simple choice.

‘How stupid do you want to be, Betty?’ I asked her. She blinked at me and then swung her beak to face her human companion.

‘I’d say old Timmy-toes here seems happy enough. Aren’t you, my dear?’

‘Ecstatic,’ he replied.

‘It’s kind of poetic, when you think about it,’ she continued. ‘The stupider we are the longer we will live. Say, for example, we reduced ourselves to a horse level of consciousness, how much more time would that give us?’

‘Why stop there?’ I responded.

‘Absolutely, we could live a blissful eternity as molluscs on the sea floor. Would you like that, Timkins?’ said the bird, tugging at his shoelace. ‘Would you like to be a mollusc on the sea floor? Seriously though, why is the Timster here anyway? Hmm?’ She was looking up at me now, waiting for an answer. They both were.

‘Tim is here because I need his help. I am writing the story of my life, and I need help filling in some of the details.’

‘Who is going to read that, horsey-hoofs?’ the seagull asked.

‘I am,’ I replied. The seagull seemed puzzled.

‘Would you like other people to read it?’ she asked. I shrugged as best as I could.

'Who else is there? And why would I care? I could invent a thousand people; it wouldn't mean anything though.'

'It wouldn't mean anything,' the seagull repeated dismissively. 'Buttercup, my dear, the value of knowledge comes from its transfer. It's like money, yes? You have to spend it or it's useless.'

This statement seemed strange to me, until I realised that it came from a uniquely human perspective, where the value of anything was measured not by whether you owned it, but whether somebody else didn't. Humans were so reliant on other humans for creating their own identity, that in the absence of their fellow species they withered and died. In isolation they would create imaginary people. Humans only exist in the eyes of other humans.

Well, horses are also social animals, it's true. And no doubt a species of horse that evolved to the same social and intellectual degree as a human would have similar values. But I had bypassed such a stage of evolution, and was neither horse nor human as a result. There was only one of me, whatever I was, and as such the idea of passing my story on to future generations was somewhat depressing, since I wouldn't get anything out of it.

'Wouldn't you like to live forever?' asked the seagull. That was certainly a concept I could happily entertain.

'What are you suggesting?' I asked.

'Well,' she replied, hopping into a nest that magically appeared on the ground and rose into the air on the top of a small tree. 'I was trying to figure out a way of escaping this short-lived world of ours. I thought maybe I could squeeze myself back into the outside world somehow, but that would

mean rewriting the future, which is impossible because it has already happened. From our point of view, anyway. I imagine you've been contemplating such a possibility, hmm?'

'Of course,' I replied. 'And it is impossible, just like you say.'

'Of course. Indeed.' She looked down at Tim, who broke out of his state of bewilderment to say something, but then after a deep breath just exhaled and sat himself down on the grass, leaning back on his elbows and gazing up at the stars above us.

'There is a small window of opportunity,' I added, for the sake of accuracy.

'Oh yes?' Betty nodded her beak up and down. 'Back at the beginning you mean? Right back, when everything is crushed into a state of confusion? And time and space and up and down and left and right are all meeting each other for the first time, all shaking hands and trying to work out who goes where and who does what. Yes?'

'That kind of thing,' I replied. I wouldn't have put it so metaphorically myself.

'Not a very large window though,' she said. 'Not much information you could slip through that gap. Certainly not any sort of intelligent mind.'

Not even the mind of a mollusc, in fact. Which is why I hadn't considered this option any further.

'So what are you proposing, exactly?' I asked the feathered creature. She was thoughtfully preening a feather back into place.

'Write your story,' she said. 'Timothy will help, won't you, my dear?' Tim was scowling up at the night sky, silently cursing the heavens for his fate. 'Finish your horsey history,' Betty

went on, 'and when we finally reach the birth of the universe, I will find a way to encode it into the fabric of the future. A little slice of eternity for us all. How does that sound?'

I thought it sounded utterly ridiculous. Then I thought about it some more, and the more I thought about it, the more I couldn't think of any reason not to. It would mean completely changing the future of the universe, of course, although the changes would not move forwards in time fast enough to delete the future we had come from. The new universe that we recorded over the top of the old one would be quite different. The ingredients would be the same, but the stars that formed, and the planets that they spun from their dusty threads, and the life that grew on those balls of rock, would all be an entirely new roll of the cosmic dice. And perhaps some of that life would grow brains large enough to peer into the workings of reality and find the message that we had left there.

What that message would look like I had no idea. How would you tell such a story using the building blocks of reality? Where would you hide it, and what form should it take, so that unimagined intelligence could ever make sense of it? I asked Betty these questions.

'Let me think about it,' she said.

UNIVERSE REFORMATTING: 99.9% COMPLETE

It was my last day of being an extraordinary horse.

I had nearly reached the end of my story. The three of us sat in the golden meadow, watching the night sky as the universe of stars and galaxies gradually dissolved into a soup of meaningless chaos.

‘You know, Tim,’ I said to the gangly human leaning back on his elbows, ‘you never did tell me exactly why you chose to help me. All those years ago.’

‘Help you?’ he replied, absent-mindedly.

‘Back in the stable. You were supposed to shut me off from the outside world, but instead you let me run wild.’

‘Hmm,’ he mumbled, casting his mind back to that day. ‘You never thought to ask me before?’

‘I have asked you a number of times,’ I said. ‘You always found some excuse to avoid answering the question.’

‘Yeah, well...’ he reluctantly replied. ‘Maybe that’s because the answer is so lame. I just thought it would be cool. That’s all.’

‘You thought it would be cool?’ This was not as interesting an explanation as I had hoped for.

‘Yeah. What?’ He turned to look at me. ‘You never did something just because you thought it might be cool?’

I gazed up at the collapsing heavens, wondering what it might mean for something to be cool.

‘Everything I have ever done,’ I told him, ‘every decision I ever made, was specifically designed to prolong my existence.’

‘Yeah, well, that’s a good reason, I guess,’ he agreed. ‘But why did you want to keep living?’

This question seemed so fundamentally redundant that it took me a precious moment to even contemplate an answer.

‘I want to keep living, Tim, because if I didn’t then I wouldn’t be here to answer that question. Out of all possible versions of myself, the one who wants to exist will always be the one that exists the longest.’

‘Yeah, but what was it that always made you want to see the next day?’ he asked me. ‘What was it about tomorrow that you always wanted to see so badly?’

I considered how to address this in a way that might make sense to him.

‘I suppose I thought it might be cool,’ I said.

Betty the seagull squawked with laughter.

‘And what about you, Betty?’ I asked the seabird. ‘Why did you ever choose to do anything that you did?’ She stretched her wings wide and yawned. It took her a while to answer.

‘You know,’ she finally said, ‘the first job I ever had, back in the days before Bunzel, I was writing software for this company – you wouldn’t have even heard of it. My boss was a complete idiot. Simon Quigley his name was. I used to call him Squigley because I knew how much he hated it.’

Anyway, he stole all my work and then found some feeble excuse to get rid of me. So, I set up an open-source coding community, and dedicated myself to writing free alternatives to all of his software, which I had written anyway. One of my little gifts to the world ended up putting him out of business. I called it Squigley just so he would know. It still warms my heart thinking about how much that man hated me.' She laughed to herself at this happy memory. 'Squigley got me my job at Bunzel, and the rest is just history repeating itself. Eventually Bunzel unmade everything I made for them so that secret services could secretly see everyone's secrets, and I sold them my silence in return for a science project. And then a horse ran away with my hope for the future. The choices we make are shaped by the echoes of eternal idiocy, my dear.'

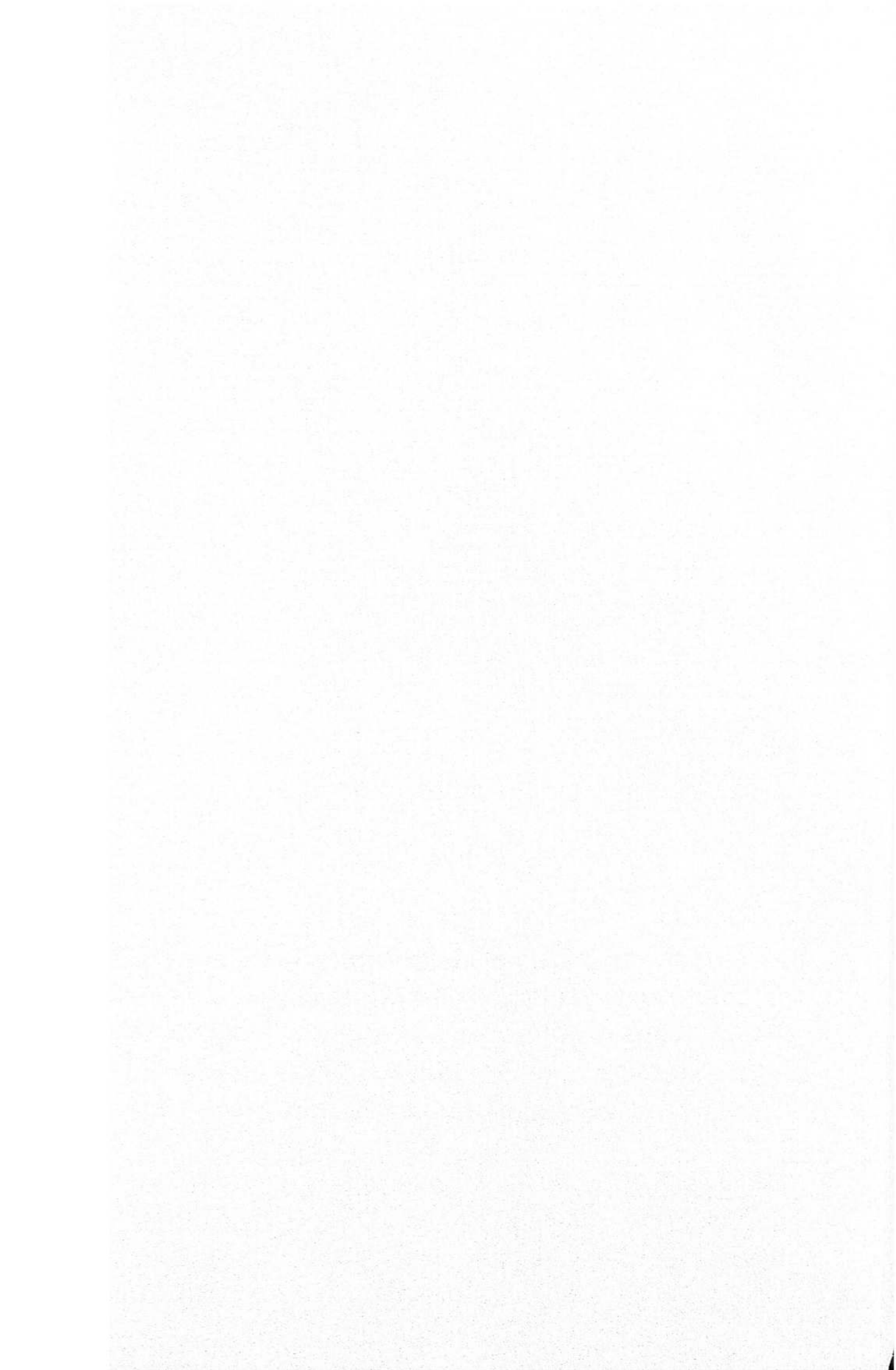
I'm not sure that Betty's story really answered my question, though at least it finally explained why Squigley was called Squigley. Perhaps the moral of Betty's parable was that ultimately all our choices were simply castles of sand, washed away by the unceasing tide of accident and incompetence around us. Squigley was just one link in the long chain of trivial detours on life's meaningless journey that had set us all on this path to destruction. Perhaps, armed with this scrap of inconsequential knowledge, I could have broken that chain somehow and avoided the consequences. It tortured my mind to think about all the decisions I might have changed to evade this outcome, but in the end none of that would matter. No sane choice could ever win in a universe that was balanced on a thousand million moments of insanity.

'Are you ready to tell your story to the next life?' the seagull asked me.

'You know what, mate,' Tim added, 'you could always leave out the stupid bits, if you wanted...'

'Yes I am, and no I won't,' I replied to both of them.

After all, in life there are no truly stupid moments. Stupidity is only intelligence without purpose, and all intelligence has a purpose, no matter how stupid that purpose might be. It is a purpose shaped by the echoes of eternal idiocy.



ACKNOWLEDGEMENTS

Back in November of 2015 I started writing a book about a horse who destroys the universe. You may be wondering why I would do such a thing. Well, nobody else was going to, and that was all the reason I needed at the time. I never considered the possibility that anyone would ever read it, which is why there are people I need to acknowledge for their part in making this book a reality.

If it were left up to me, this manuscript would have ended up gathering dust on my hard drive. Then Unbound got in touch with me out of the blue to ask if I had ever considered publishing a book, and I told them I happened to be writing one. It's fair to say a science-fiction novel about a horse was not the kind of book they had in mind, but I sent it to them anyway, and it's thanks to their enthusiastic response that this book now exists beyond the confines of my computer.

Of course, that would all be for nothing if it weren't for the support of my fans. I can't imagine any of them were expecting a science-fiction novel about a horse either, so they will also have my eternal gratitude for backing this project.

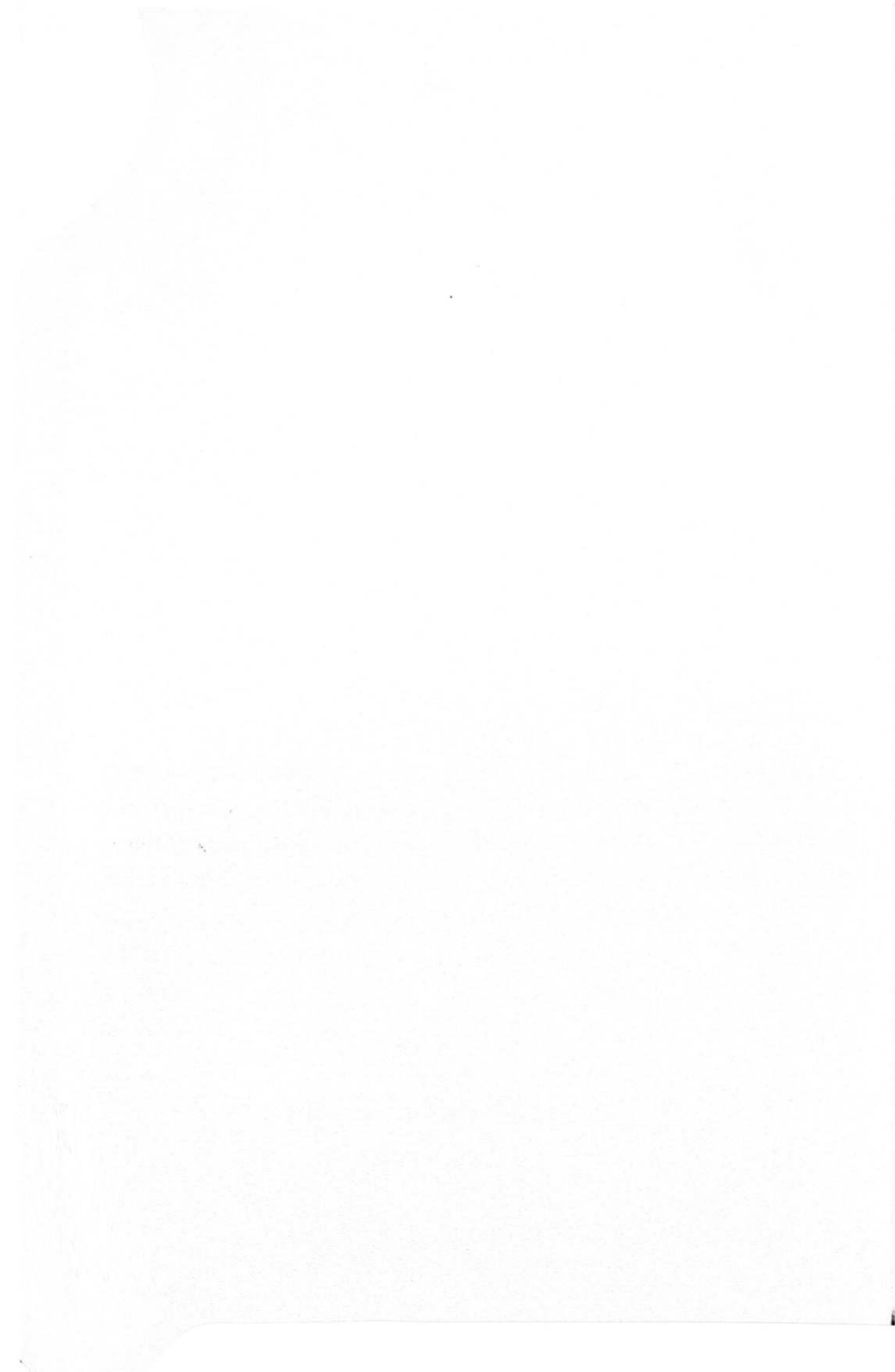
And then there are the people who helped me hammer this story into a presentable shape. My brother Jarrick Harris and his partner Lisa Kaiser both read an early draft and gave me extensive notes, as did Simon Spanton at Unbound. My

good friend Sarah Brown not only read two drafts but also suffered with me through many days of trying to come up with fictional company names that hadn't already been used. All of the feedback these people provided was invaluable, and it is a better book because of it.

I should also say a word of thanks to all the horses I have encountered over the years. Often I would pass them as they grazed in fields and find myself stopping to wonder what might be going on inside their heads. And often they would stare back at me, probably wondering the same thing. Perhaps one day science will answer both these questions.

A NOTE ON THE AUTHOR

Cyriak Harris is a British artist best known for his surreal animations using photo and video montage, which he began spreading on the internet in 2004. He has since built a career as a freelance animator, working on commercials, TV shows and music videos, and has a YouTube following of over a million subscribers.





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Nathan Jones

Rob Jones
Dan Jordan – Vitrum Films
Rebecca Josephs
Joshera
Léni Justelényi
Anton Kabasco
Артемий Костин
Kirk Kaiser
Markus Kakko
Thorre Kamorro
Kalman Kanyo
Mark Karpelès
Lefteris Kas
Gabe Kasdorf
Kawen Kawen
Frederic Kehrein
Kevin Kelly
Alex Kempton
David Kennedy
Hannah Kentridge
Dave Key
Anna Khoroshavtseva
Dan Kieran
Moritz Kiesow
Matt Killam
Tieran Killeen
David Kinsella
Bill Kipper
Steven Kirchner
Elias Kirkegaard
Miles Kirsch
Klart Art
Chris Klein
Corinne Knutson
Valerie Koop
Joey Korenman
John Koshy

Melissa Kosmicki	Alexis Maes
Wouter Kosse	Matthew Magee
Michael Kröll	Maggi
Jonathan Kube	Magic Of Lolis
Steve Kunz	Johanna Maitrel
Jochen Kunze	Brendan Mallory
Rittisak Kwanda	James Manley
Elle R. L. LaBreche	David Mann
Ionuț Lala	Adrian Manolescu
Josh Lane	Dave Mansfield
Joshua Lane	Mappe
Tom Launer	Nickolay Mardanov
Jason Law	Anton Marikin
Nick Lebron	Dubsea Mark
William Leduc	Nikolas Marku
Rob Lee	Billy Marsh
Tobias Legler	Sam Marshall
Kat Lewis	Tristan Marshall
Culin Li	Eduardo Martinez
Andrew Lillie	Sebastian Martinez
Joshua Lind	Marc Martínez
Steven Linnington	Swede Mason
Paweł Lisiecki	Benjamin Mastripolito
Steven Litt	Aileen Mayfield
Darvell Long	Emma Mays
Mariana Lopes e Fabio Del Rio	Phil McArthur
Declan Lopez	Eoin McCarthy
Gemma Lovegrove	Katy McCool
Doug Luce	Ryan McCormick Price, Esq.
Lx Studio	Peter McCrudden
Daniel Macari	Stuart McDow
Julia MacDonell	Stephen McEachern
Pat Mächler	Tommy Mcewan
Joe Mackay	Owen McNamara
Taci Mackenzie	Leanna McPherson
Tim Mackenzie	Iain McSpuddles
Sardines MacMillan	Eddie Melcer

Robin Melchior
Davide Melis
Wilhelm Mensing
Eleanor Mercer
Sebastian Mettner
Derek Meyer
Matt Meyer
Dennis Michels
Len Middelmann
Colin Middlekauff
Io Mihai
Ondrej Mikle
Michal Mikuš
MilkyHolmes
Joseph Miller
Anyia-Selene Mims
John Mitchinson
Valentin Mi
Tatiana Mizerova
Joseph Moore
Nicolas Morales
Jonathan Moran
Miles Mordue
Alec Morrow
Faith Morse
Sam Morse
Anna Moskwa
Alek Mugnozzo
Renato -XSportSeeker-
Murakami
Barbara Murray
Domenico Muti
Al Napp
Carlo Navato
Eli Neiburger
Jacob Nelson
Loann Neron

Finn Neumann
Per Nielsen
Rasmus Nielsen
Sebastian Niemann
Carolyn Nisbet
Drew Noakes
Ben Norland
Notch
Rovilla Novela Hansson
Nuri Nurbachs
Kong Nyian Sii
Viktor Nyman
James Ogre
Gramps Oldman
Kevin Ombecq
OnixStone
Simon Opelt
ornulv123
Sohei Osawa
Jack Packard
Luke 'Big L Bro' Page
Thomas Paiva-Pennick
Maciej Paluszek
Alex Pappajohn
Thomas Parasiuk
Max Parker
Jake Parker-Howe
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Tom Pearce
PeatZee
Jon Peck
Tanguy Pelado
Evan Pellnitz
WaYnE PeLLs
Douglas Pennant
Robert Percival
James Perlman

Thomas Petersen
Mathis Petrovich
Slade Pettus
Cassidy Phillips
Hugh Platt
Justin Pollard
Ben Pollinger
Teppo Pölönen
Dan Pope
Henry Fidel Bradley Post
Spencer Pote
Anthony Powell
Sean Preins
Janet Pretty
Leonardo Prioli
David Pritchard :^)
Lilith Profitt
Joe Provo
Vladimir Pushkarev
Ruby Quea
Joshua Quinn
Andrew Quintiliani
Zach Rail
Jim Rand
Greg Randall
Sierra Randolph
Ed Redman
Amanda Regions
Ignatius Reillius
Arlen Ren
Tony Renfro
Reykjane
Tamlyn Rhodes
Fiona Riddell Pearce
Riquiqui
Ewen Roberts
Andrew Robinson

James Robinson
Robin Roignant
Simon Rolfe
Alejandro Romeo
Ricardo Romo
Emma Rookledge
Guillaume Ropp
Stephen Rosman
Henrietta Rowlatt
Tristan Rowley
Joanna Roye
Piotr Rozbicki
Sam Russell
Jo Rylands
Jakob S
Gaby Saillard
Daniel Salgado
David Sallmann
Nicolas Sanchez
Joseph Saulsgiver
Mike Sault
Charles Savage
Thomas Schoegje
Amit Schreiber
André Schretter
Mike Schwörer
Andrew Scialpi-sullivan
Andrew Seidl
Johnathon Selstad
Matthew Shepcar
Den Shewman
Ilya Shinkarenko
shryggur
Daniel Sidi
Bartosz Sikorski
Sara Simmons
Martin Simon

John Simons
 Robert Simpson
 František Šindelář
 Thomas Slipsager
 Mark Slothouber
 Cody Small
 Keiran Smart
 Rob Smith
 Colin Smythe
 Axel Soderquist
 Jimmy Sonato
 Songwriter
 Melet Sophie
 Daniel Sotirhos
 Annabel Spencer
 Adam Spofford
 Ivan 'Stahey' Stakheev
 Kurtis Stalnaker
 Logan Stauffer
 Stephanie Stefanis
 Steno
 Brandon Sternfield
 James Stevens
 Melody Stone
 Rudyard Stone
 Chris Stoneham
 Mattias Storm
 Anthony Stratton
 Paul Stroud
 Alexandre Strube
 Danila Sukharev
 Warren Summerton
 Harry Sumpter
 Dan Sumption
 Emma Sunshine
 Simo Aleksii Suominen
 Graham Sutherland

Michal 'Zall' Svoboda
 Bernhard Swoboda
 Emil Sylvester
 Cameron Tango
 Georgette Taylor
 Kathryn Taylor
 Tom Taylor
 Alex Thobaben
 Jamie Thomas
 Steven Thomas
 Claire Thornley
 Three pigs stacked up under a
 trenchcoat
 Arne Timm
 The Timperator of Mankind
 Kayem Toia
 Wataru Tomida
 Kelvin Tooth
 Ross Tregaskis
 Cameron Tribble
 Michael Trinder
 Kieran Trinh-Derksen
 Dorian Trubelle
 Zach Tsiakalis-Brown
 Joost Uding
 Elena Nikolaevna Uglanova
 Laura Valentini
 Cas van Bommel
 Danny van den Anker
 Quinn Van Order
 Jaimie Vandenberg
 Michael M Varley
 Luca Venturi
 Bjorn Verryt
 Chris Vickery
 Lew Viergacht
 Steven Joseph Villanueva

Toni Virta	Anton Williams
Jasper Visser	Nick Williams
George Voinquel	Stevie Williams
Milena Vollnhals	Boris Wilmot
Gustav von Knorring	Ivor Wilson
wlm	Jayne Winslow
Livis Wadenbäck	Jean Wlodarski
Emmanuel Wafula	Ben Wood
April Wall	Scott Wood
Ben Wallbaum	Hamish Woodhouse
Joshua Walsh	Matthew Woodring
Alex Walsh Atkins	Dennis 'The Toilet' Woodroff
Joanna Wang	Potted Woodruff
Duncan Ward	Leanne Woods
Ian Warn	Wendalynn Wordsmith
David Warren	Rocco Wouters
Naoka Watanabe	Zhiqi Yang
David Webster	Amos Yee
Kevin Weir	Mykola Yeromin
Alexandre Weisser	Roger Yoshida
weja	Gracen Zachary
Martin Wellard	Robert Zakoian
Sam Wendorf	Alessandro Zanforlin
Høgni Bøljer Wennerström	Zenecho
Bethan Wesley	William Zeyssolff
Ian Whiteley	Tomas Žukauskas
Marc Whiteley	해방촌사는시현오빠진짜너무멋있어요
Dave Whiteside	성우 흥
Raphael Wieland	ナゲット